

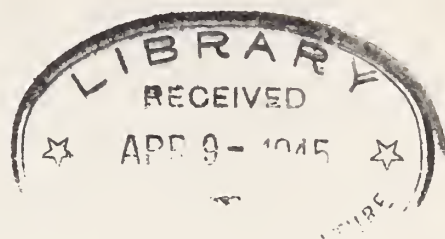
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ISOLATED SETTLEMENT IN KOCHICHING COUNTY, MINNESOTA

By  
John E. Mason  
Associate Agricultural Economist

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November 1940



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## SUMMARY

Farmers and local officials in Koochiching County have recently come to recognize that high-cost isolated settlement is one of the most pressing problems facing them. They have suggested that information be gathered as a basis of a sound decision in regard to the proper handling of each case of isolation. This report is the result of that suggestion, and is based upon data secured largely by personal interviews with isolated settlers, including 37 families and 38 unmarried men.

Location of timber, accessibility to river transportation, distribution of agricultural land along the rivers, location of drainage ditches, and the encouragement of homesteaders by the State and Federal Governments as well as by private real estate operators and speculators are factors contributing in one way or another to the scattered settlement pattern.

Agriculture is but a minor form of land use in Koochiching County, for after 40 years of settlement and exploitation, fewer than 1,500 farmers occupy 171,000 acres, or 8 percent of the total land area.

Only a very few of the isolated settlers have sufficient land cleared and enough livestock to produce an adequate income. Taxes are delinquent on many of the isolated holdings; several isolated settlers are squatters on publicly-owned land.

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1/ Valuable assistance was rendered during certain stages of this study by Joseph T. Elvove and William F. Husbach. Thanks are due the staffs of the various county offices for providing data.

Advanced age is a serious handicap to relocation of a large number of the isolated settlers on farms. The heads of families average 51 years in age; the unmarried men average 59.

Housing conditions are below par; only 27 percent of the families live in houses rated good, 46 percent were rated fair, and 27 percent were definitely poor. Only 3 percent of the bachelors' structures could be rated as good; 42 percent were considered fair, and 50 percent were poor.

Two extreme attitudes toward relocation were noted: One or two settlers indicated that nothing short of force would move them; and 4 or 5 were really anxious for an opportunity to resettle in a better location. The majority seemed to be content with their present residence, but were willing to move to better locations.

Although more or less intangible, private costs of isolation are as important, if not more so, than public costs. Private costs appear as inconveniences and hardships resulting from poor roads and poorly equipped homes, lack of social contacts, and direct money outlays for snow-plowing and transfer of products to or supplies from the markets. Distance to neighbors, grocery stores, doctor, church, school or school bus route, shipping point, and to an all-weather road are translated into high costs both to the tax payers who are forced to foot the bills for public services and to the individual settler who must bear the costs in the conduct of normal, everyday activities.

High cost of roads and schools for isolated settlers is not borne entirely by those benefited. Road maintenance cost and school bus or board aid for the isolated settlers interviewed amounted to \$4,349 in 1938, whereas the total tax levy against the same group was only \$1,303, of which approximately two-thirds will be collected, based on a study of the tax status of the isolated tracts. Other public costs, though difficult to measure in dollars and cents, include extra costs incurred by the county nurse, county agent, and teachers of vocational agriculture when they must visit remote places in the performance of their duties. Then too, election and assessment costs, rural mail delivery, administration of game and other laws, and forest-fire protection costs are increased as a result of scattered, isolated settlement.

Relocation, aided and guided by public agencies, is the principal instrument to solve or alleviate present problems of isolation, and rural zoning can be used to prevent the development of new instances of isolation.



## INTRODUCTION

Isolated settlement is a major land-use problem in the cut-over region of the Lake States and in many areas of land-use maladjustment throughout the United States. The most serious manifestations of isolation are rural poverty, low levels of living, almost complete absence of community life, high unit costs of public services, and the need for relatively large amounts of money in the form of State aids for schools, roads, and other public services.

Although sparse settlement has long been recognized as a major economic and social problem, only recently has any concerted effort been directed towards its solution or alleviation. During the 1920's many land utilization studies were instituted to measure the problems and bring them to the attention of the people, legislators, and other public officials, but it was not until Wisconsin adopted a rural zoning enabling act in 1929 that passive public interest was in any way translated into public action. It was not until 1933 that any county in Wisconsin took advantage of the enabling act to adopt an ordinance closing nonagricultural areas to further settlement. Since 1933, a total of 26 northern Wisconsin counties have zoned their lands, closing 5 million acres of nonagricultural land to new settlement.

The Federal Government inaugurated the submarginal land retirement program in 1934. In Wisconsin, the program was utilized to a great extent to remove nonconforming users from the restricted or non-agricultural districts, while in the other States it served to assist remotely situated families to obtain new and better locations.

The most recent attempt to cope with the problem of isolation in northern Minnesota arose as a part of the new planning program which incorporates the democratic participation of farmers in the planning process. This program, undertaken jointly by the University of Minnesota and the United States Department of Agriculture, is based upon the philosophy that decisions in regard to agricultural policies should be made by the people most directly affected; that is, by the farmers themselves.

Koochiching County was the first county in northern Minnesota to undertake a study of its land-use problems, looking toward the formulation of programs and policies for the future development of the area. Beginning in the fall of 1938, the farmers and local officials, utilizing technical information assembled by State and Federal research agencies, prepared a land utilization program designed to aid in the solution of its many problems. 2/

2/ Musbach, William F. and McMillen, R.E. (Unpublished manuscript on file in the office of the County Agricultural Agent, Koochiching County, International Falls, Minn.)

One of the most pressing problems recognized in the study by the local people was high-cost isolated settlement. In classifying the land according to its best-suited use, questions arose as to the policies that should be recommended for rural families living a great distance from an all-weather road, neighbors, markets, schools, and other essential public services. As not all of the isolated families were causing undue expense for schools and roads, and not all were using the land contrary to public interest, the county land-use planning committee felt that additional information was necessary before a sound decision in regard to the proper handling of each case of isolation could be made.

Isolated settlement is more than a physical problem involving distance between land occupants. Although the lack of population concentration is the most evident manifestation of a serious land-use maladjustment, other factors, such as the amount and source of income, the extent of cropland, the number of livestock, the tax delinquency, the land tenure, the levels of living, and the social attitudes, are important measures of the maladjustment associated with isolation.

The University of Minnesota and the United States Department of Agriculture jointly provided the facilities for making a detailed study of isolation in the county, and information was obtained to learn the public and private costs due to isolation, to set up a priority list of isolated settlers for relocation, and to determine possible savings and advantages to the county, State, and Federal Government by relocating isolated settlers.

#### PHYSICAL, HISTORICAL, AND ECONOMIC SETTING

Before proceeding with a detailed analysis of isolated settlement, it is necessary to record briefly some of the facts concerning the location, population, topography, climate, transportation facilities, early settlement, and agricultural development of the county, and to examine some of the causes contributory to isolated settlement.

Koochiching is the central of the 7 northern counties in Minnesota which border on the Dominion of Canada. (Fig. 1) It is separated from Canada by Rainy River, and is bounded on the south by Itasca County from which it was formed in 1906, on the east by St. Louis County, and on the west by Beltrami and Lake-of-the-Woods Counties. Measuring more than 3,100 square miles and containing well over 2 million acres of land, the county is the second largest in the State, exceeded in size only by St. Louis County.

The 1930 population was 14,078, classified by the Bureau of the Census as follows: Urban 5,036, rural farm 4,738, and rural non-farm 4,304. The farm population in 1935, according to the Census of Agriculture, was 5,736. The rural population, including farm and nonfarm groups, is only 3.2 persons per square mile. An interesting fact, not generally known outside of the cut-over area, is that an unusually high







percentage of the population in the sparsely settled sections is made up of unmarried men, living alone. The proportion is so large, approximately 50 percent of the isolated cases in this study, that bachelor households and family households have been treated separately for certain phases of the analysis, which explains the numerous references to "bachelors" and "families".

Most of the county was once a part of the glacial Lake Agassiz. When the lake disappeared many thousands of years ago, large areas of poorly drained swampland remained, and as the drainage system became mature, relatively small areas of high land were formed along the rivers. This high land has developed into productive clay and clay loam soils with minor variations of sand and rock occurring interspersed among the heavier soils. As the remainder of the area is mostly peat or muskeg, it is the high land that today forms the primary agricultural base of the county. 3/

The topography is generally level or undulating, with the more rolling land in the southern part of the county. Going from the southeast to the northwest portions of the county, the elevation drops at the rate of approximately 4 feet per mile. Forming part of the watershed of Hudson Bay, the county is drained principally by the Rainy River and its two main tributaries, the Little Fork and Big Fork Rivers. The climate is typical of northeastern Minnesota, which is characterized by long, severe winters and short, relatively cool summers. The annual precipitation varies from 25 to 30 inches, and of this total, snow forms an appreciable part. The growing season ranges from 80 to 110 days, and although too short for the production of corn, it is sufficient for grains, legumes, and potatoes. The long, cold winters result in an ideal logging season of 4 to 4½ months.

French traders and missionaries penetrated into what is now Koochiching County as early as the 17th century, but no permanent settlement was made until the close of the last century. As late as 1900 the county was practically an unbroken forest wilderness. Between 1900 and 1920 a large part of the county was homesteaded, but this settlement was principally motivated by a wish to exploit the timber resources rather than to find permanent homes. One of the early settlers wrote recently:

"Few of the settlers of that day had any idea of opening up a farm as they had filed on Government lands for the purpose of selling the timber and then return to their former homes with a 'stake'. The writer was included in this class." 4/

3/ This and other paragraphs in this section on settlement and agricultural development are based largely on the unpublished manuscript by Musbach, William F. and McMillen, R.E., op. cit.

4/ Lang, Frank S. The Daily Journal, International Falls, Minn. February 21, 1935.



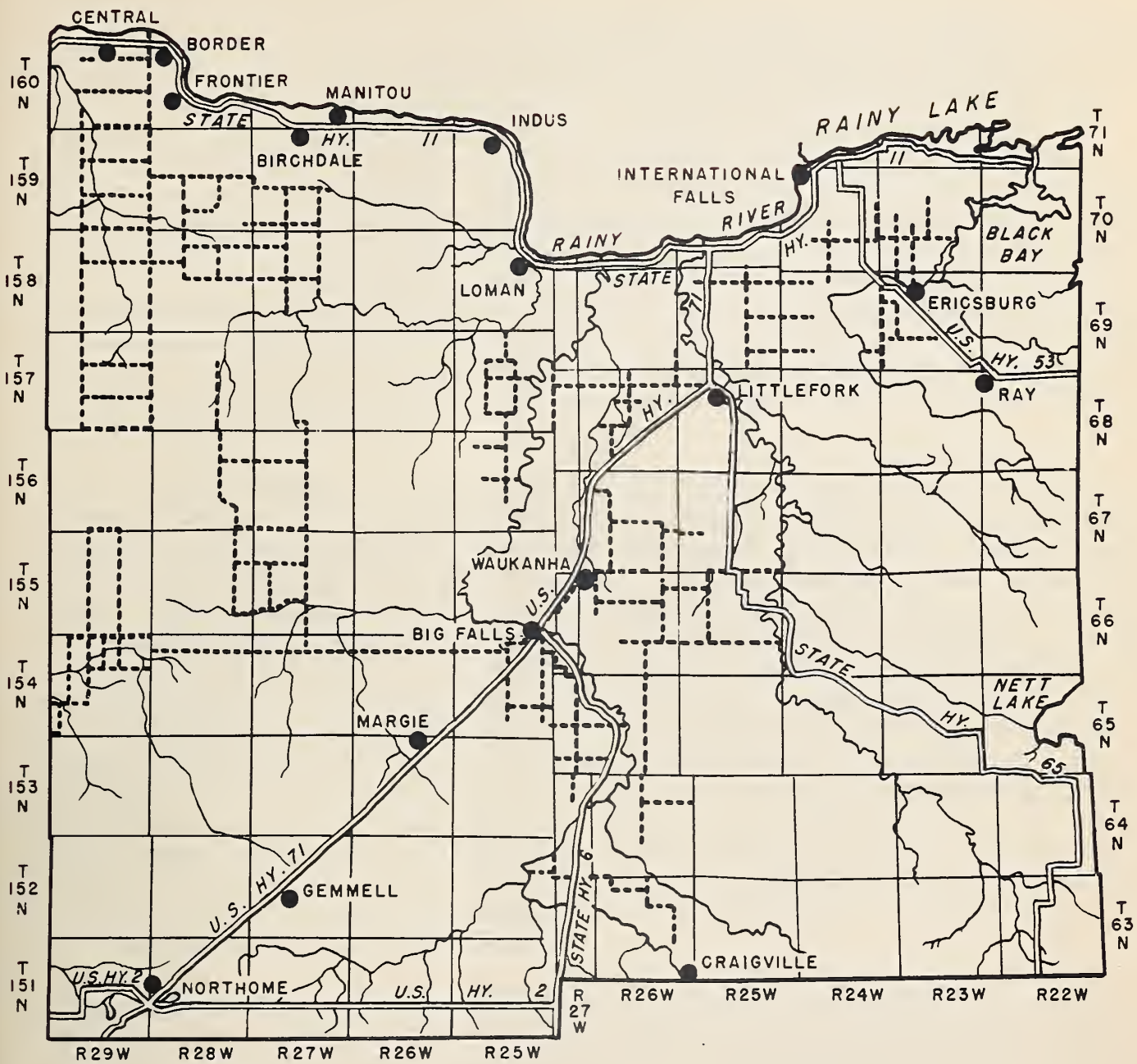
Consequently, the settlement pattern at first was largely determined by the location of timber and by accessibility to river transportation. Later factors like the distribution of agricultural land along the rivers and the location of drainage ditches influenced settlers in their choice of homesteads. (Fig. 2.) Isolated settlement was not considered a problem in the early development of the county because it was believed that all lands would soon be settled. When the rate of settlement tapered off after the World War and when it became apparent that drainage of muskeg swamp did not make productive agricultural land, many small clusters of settlement were left isolated from the population centers of the county. Many of the early homesteaders moved voluntarily into the larger, better farming communities, but others remained behind and have since demanded expensive roads and relatively costly school facilities for their children.

During the period of original settlement no effort was made to concentrate settlers so that roads, schools, and other public services might be provided at reasonable cost. On the contrary, settlement plans were made with the expectation that future growth would provide the means to finance public services over practically the entire area and with the assumption that isolation was therefore, a very temporary phenomenon. Because these dreams were not fulfilled, large public debts were incurred during a period in which the tax base failed to grow as anticipated. The tax base has actually declined, and the financial burden has become almost unbearable. Many families who settled in isolated areas have wasted not only their money and labor for land and improvements, but have also wasted many years of their lives waiting in vain for complete development of their communities.

Although the Federal and State Governments were primarily responsible for the indiscriminate and unwise homesteading of poor lands, private real estate operators and speculators did much to encourage the present uneconomic pattern of settlement. Professional "locators", for a fee, usually \$50, deliberately scattered their clients to make easier the inducement of others to homestead in the vicinity. A typical procedure of an unscrupulous locator would be first to persuade the client to wait until fall to homestead. As the area the locator was "developing" might be low and swampy, its unsuitability would be apparent in the spring during melting snows and heavy rains. But in the fall, with dry weather, good crops nearby, and a luxuriant land cover, the locator might easily make fraudulent claim or indirect inference concerning the agricultural possibilities of the land.

Tax payers in the cities, the villages, and the better-developed rural communities have helped bear the cost of such development. They have paid taxes not only for their own needs, but also to provide services for settlers in isolated sections. This makes the problem of isolated settlement a matter of vital concern to all.





**Figure 2. - Location of drainage ditches in Koochiching County, Minnesota.**



Many of the settlers, often young unmarried men, remained only long enough to establish their homesteads; others stayed on a little longer, finally became discouraged, and abandoned their partly-developed holdings. The remaining few found themselves more and more isolated each time a neighboring settler moved away.

Naturally, as the agriculture of Koochiching County failed to develop on cut-over lands, the remaining settlers became dependent primarily on the timber resources. Exploitation and a complete disregard for scientific methods of forest culture resulted in a decline in the timber industry during the World War period, a decline that has had a very significant effect upon the agricultural land use of the county. So long as part-time work was available in the woods, many individuals preferred to depend upon their farms for little more than a home and a part of their food supplies. But when this supplementary income disappeared, these part-time farmers became dependent on agriculture as a main source of income. As tracts homesteaded for timber were often totally unsuited to farming, the shift from forestry to farming was not always complete, and so many expert woodsmen found commercial agriculture a difficult, if not totally impossible, means of securing a livelihood.

Agricultural development of the county has taken place neither as rapidly nor to the extent originally predicated. After 40 years of settlement and exploitation there are today only about 1,500 rural families and they occupy only 171,000 acres of land, or but 8 percent of the total land area. More striking is the fact that only 50,000 acres, or 2.4 percent of the county's lands, have been cleared and placed under cultivation. Three-fifths of the farms have less than 30 acres of cropland and may be classified as subsistence or part-time units; one-fifth are small commercial farms with 30 to 50 crop acres per unit; and the remaining one-fifth are commercial farms containing more than 50 crop-acres per farm. The commercial farms are largely of two types: alfalfa and alsike seed farms, with dairying and potatoes as supplementary sources of income; and general farms, with approximately equal emphasis on dairying and grass-seed production. In general, the smaller farms are of the first type, while the larger units fall into the second classification. It is apparent that agriculture is only a minor form of land use in Koochiching County.

International Falls, the county seat with a population of approximately 6,000, is the center of the principal industry--paper making--and serves as the chief shopping center for large parts of the agricultural and lumbering communities. Two smaller towns, Littlefork and Big Falls, with populations of approximately 500 each, are the only other communities of any size in the county. There are a dozen or so small settlements with populations ranging from 25 to 300. Outside of the large paper company in International Falls, the industries consist principally of service establishments such as grocery and general stores, garages, filling stations, banks, restaurants, hotels, taverns, and amusement centers.

Koochiching County is adequately served by 425 miles of county roads, 98 miles of State-aid highways, and approximately 150 miles of town roads. In addition, the area is traversed by 2 major Federal and 4 State highways. Good railroad service is available in the county



to the Twin Cities, Duluth, and Winnipeg. Yet, despite this network of transportation facilities, the marketing of farm products and social intercommunication are often difficult, if not impossible, for many of the isolated settlers.

Thus, the problem of isolation in Koochiching County is found in a setting of recent development. As the roots of the land problems in the area are still visible and as their growth is so recent that it has been witnessed by many of the present land occupants, changes in the land-use pattern are relatively easy. Utilizing thoroughly democratic processes, the people of the county have already begun to investigate the changes that are needed and the best methods for securing these changes. This study was an attempt to examine one serious maladjustment, that of isolation, and this report attempts to suggest, to the people of Koochiching County, methods for its correction or alleviation.

#### DEFINITIONS AND METHOD OF PROCEDURE

"Isolation" is a term whose absolute definition is difficult because of the wide variety of meanings it conveys to different people. The people of southern Minnesota visualize all of the area as isolated, since they consider northern Minnesota only as an extensive recreational region for hunting, fishing, and camping. To persons living in New England, on the other hand, all of Minnesota, southern as well as northern, is a region of comparative isolation. Within northern Minnesota, however, and in Koochiching County in particular, the concept of isolation has a real meaning in terms of public and private costs due to the settlement pattern. In this report an attempt has been made to measure isolation through an examination of the cost of services that are ordinarily provided at public expense, and through a determination of the relatively intangible private costs which the settler must bear because of his remote location.

Although it is possible to set up maxima for public costs which, if exceeded, would constitute isolation, such standards were considered too narrow and arbitrary. Instead, by using the classification prepared by the local people, all persons living in the nonagricultural areas were considered as isolated, and, in addition those families in the agricultural areas for whom a mile or more of road is maintained primarily for their exclusive use. For most of the settlers in the nonagricultural areas also, 1 mile or more of road serves only the 1 family. If there are children, other public expense is incurred, for one of three procedures must be followed: (1) Extension of the regular bus route, (2) creation of a "private" bus route for the one family, or (3) boarding of the children near a public school at public expense. As extension of bus routes is usually impracticable because of the extra time or distance involved, or because of impassable roads, one of the two other procedures is usually followed.



A few settlers in the nonagricultural areas are located at intervals on State highways but they may as well be considered isolated because of the distance to settled communities and potential costs of school transportation, even though the roads are in good condition and kept open throughout the winter to serve through traffic. (Fig. 3.)

This study was originally intended to include only settlers in the areas classified by the local citizens as nonagricultural, 5/ but it was later broadened to include several settlers within the areas classified as agricultural. They were on the border of the agricultural district, and only those were included who were quite a distance from such community facilities as schools, churches, doctor, shipping point or market, and for which 1 mile or more of road was necessary for 1 family. 6/ In nearly every instance, the settlers were alone at the end of a road 1 mile or more from a road used regularly by other people. To get an even better representation of isolated conditions and the problems involved, the study was further broadened to include data on the families who formerly lived in the Pine Island purchase area. 7/ To avoid confusion, the analysis of data for the Pine Island group is usually presented in footnotes and in the appendix. (Fig. 4.)

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- 5/ In the nonagricultural areas, 22 families and 35 unmarried men having permanent domicile, were located and interviewed but not 10 or 15 other single woodsmen known to be definitely transient. Only those more or less permanently located were considered in this study of isolation. There are 2 lumber camps in each of which a married couple, hired by the company, is living temporarily, pending dismantlement and removal of the property of the lumber companies; they are not included. Too late to obtain the necessary data, another isolated case was located in the nonagricultural area--a man and wife who have recently occupied what is reported to be State land. It was impossible to get closer than 4 miles by automobile, and their exact location is not known.
- 6/ On the border of the nonagricultural area, but within the area classified by the local people as agricultural, were 15 families and 3 bachelors who were included.
- 7/ The Pine Island purchase area has approximately 800,000 acres, located entirely within Koochiching County, in which the U.S. Department of Agriculture is buying lands occupied by isolated settlers, and relocating the people on better farms in more densely settled communities. In the area, 175 scattered holdings have been bought or are now in the process of transfer to the Department. Only about two-thirds of these tracts were occupied, but fairly complete data on the farms and families were obtained before purchase and relocation. These data on 94 families have been conveniently used in this study, although for many items only 55 schedules were satisfactory.

## ECONOMIC STATUS AND GENERAL CHARACTERISTICS OF ISOLATED SETTLERS

In studying the maladjustments associated with isolated settlement, one of the first and most important considerations concerns the income of the people most directly affected. It is conceivable, of course, even in the public interest, that isolated settlement might be consciously subsidized, so far as public costs are concerned, if the addition to the total national income contributed by the isolated units were great enough. On the other hand, if the isolated settlers' incomes are so low that they do not provide for security and a satisfactory living without heavy contributions from public relief, a different public viewpoint must result. Therefore, attention must be directed to an analysis of data reflecting the conditions under which isolated settlers live. For this measurement of the maladjustments associated with isolation, consideration will be given not only to the amount and source of income, but to the extent of cropland and the number of livestock which, in this area, determine to a large extent the amount of farm income. Attention will also be directed to tax delinquency, land tenure, levels of living, age and mobility, educational attainments, and attitudes toward relocation.

### Cash Income

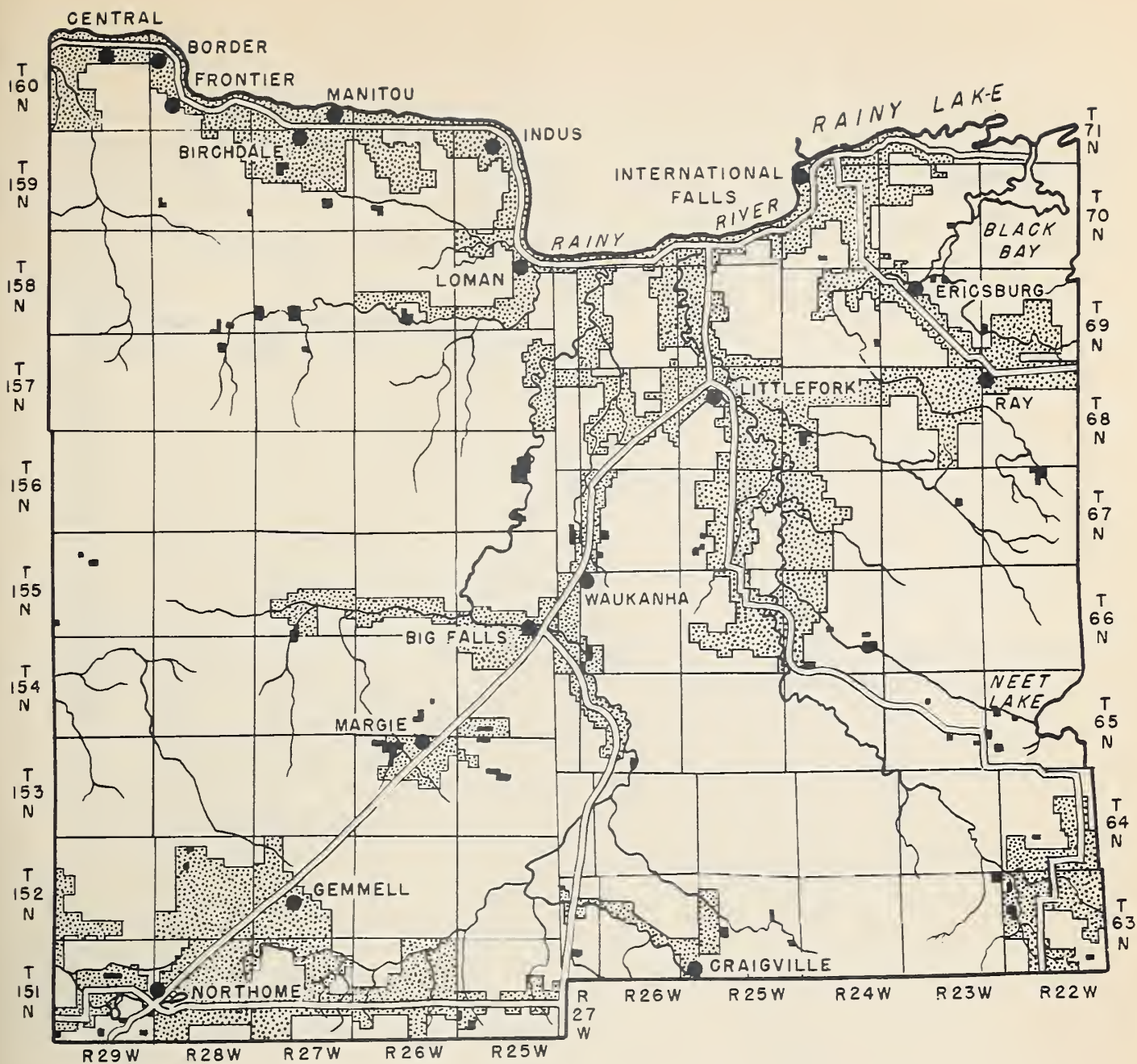
In 1938, the average total cash income received by 72 <sup>8/</sup> of the isolated settlers studied was \$411, while the modal average, calculated from table 1, was only \$319. For the families in the group the average cash income totaled \$571, but for the single men it amounted to \$244. Examining the source of cash income among 37 families it was discovered that only 20 percent of the total cash income was derived from the sale of crops and livestock; 37 percent was occasioned by the sale of forest products, work off the farm (except road work and school-bus driving), and miscellaneous sources; an additional 20 percent resulted from road work and school-bus or board aid; and the remaining 23 percent came from relief. Among the bachelors the breakdown as to source revealed that 11 percent came from sale of crops and livestock; 70 percent from sale of forest products, work off the farm, and miscellaneous sources; 3 percent from road work; and 16 percent from relief. (Fig. 5.)

Although the incomes are low and hardly adequate to provide satisfactory levels of living, they do not in themselves fully indicate the extent of maladjustment. Further examination of the source of the incomes, however, shows that the 72 isolated settlers received 37 percent of all cash from public sources, including direct and work relief, old-age assistance, soil conservation payments, road work, and school

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<sup>8/</sup> Complete income data are available for only 72 of the 75 isolated settlers.





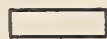
AGRICULTURAL AREAS



ISOLATED SETTLERS



NONAGRICULTURAL AREAS



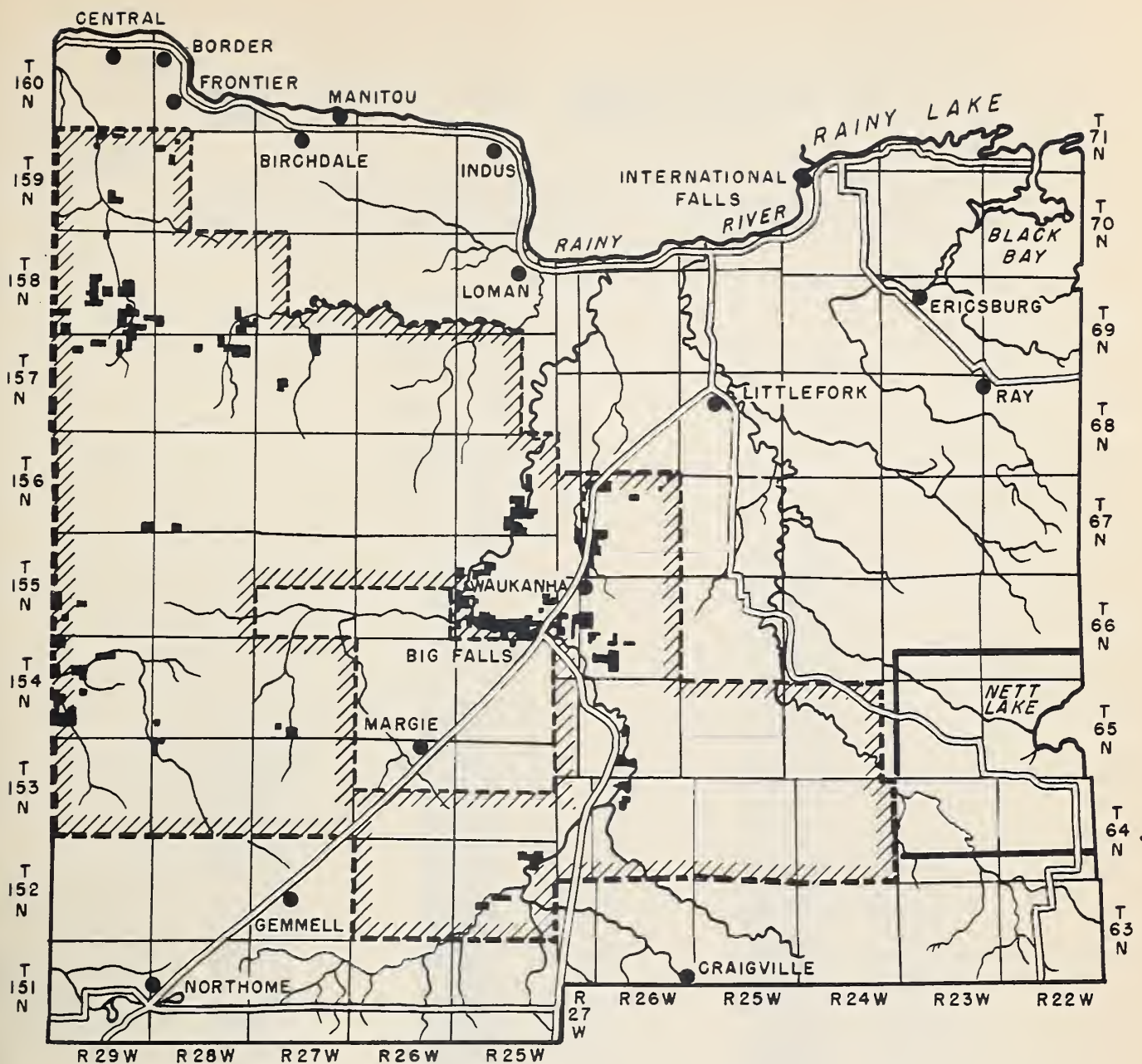
TRUNK HIGHWAYS






**Figure 3. - Location of isolated settlers in relation to agricultural land, Koochiching County, Minnesota.**



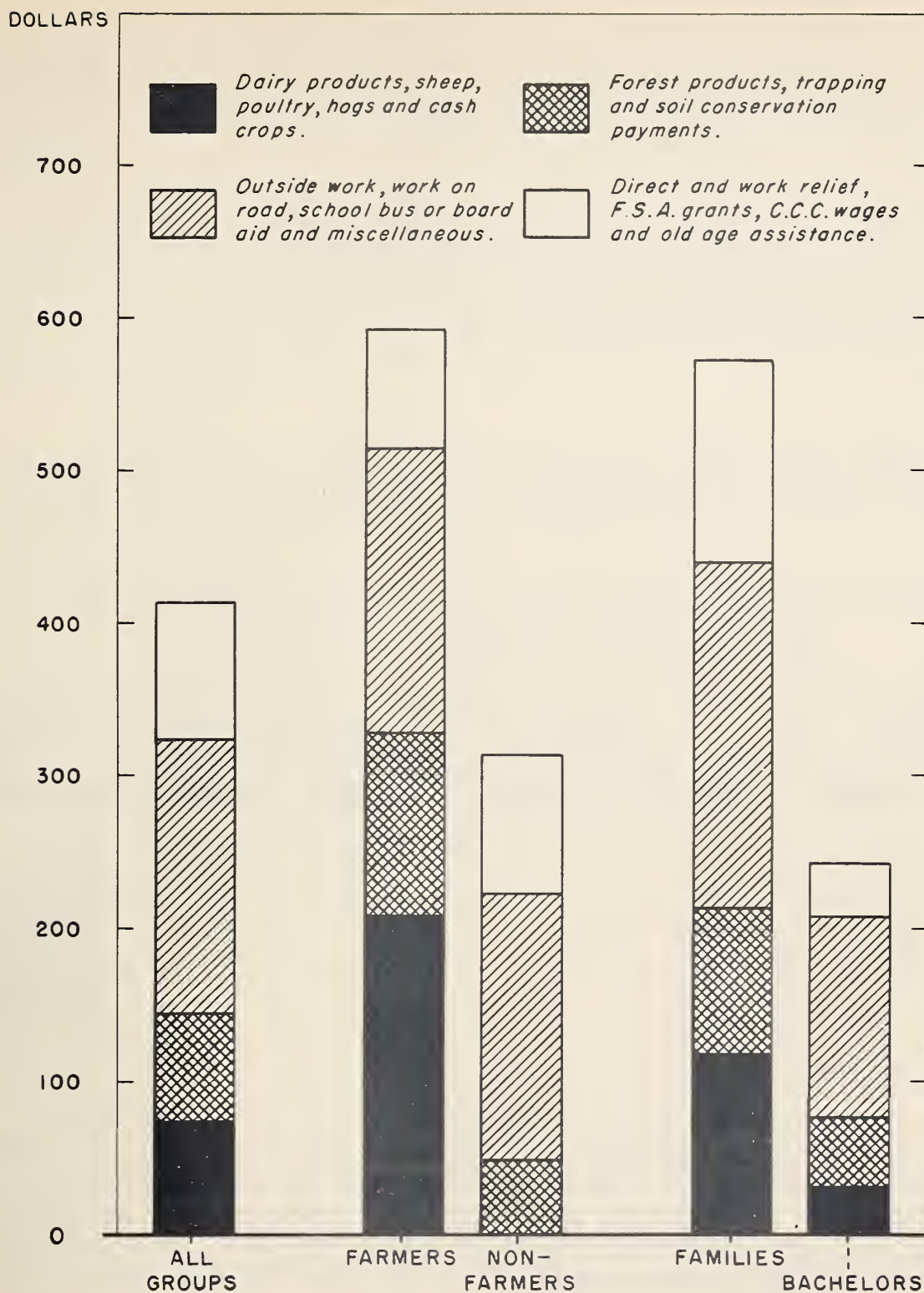




PINE ISLAND PURCHASE AREAS  NETT LAKE INDIAN RESERVATION   
 TRACTS BOUGHT BY U.S.D.A.  TRUNK HIGHWAYS 

**Figure 4. - Isolated tracts purchased by the U.S. Department of Agriculture in Koochiching County, Minnesota since 1934.**





**Figure 5. - Average cash income of 72 isolated settlers in Koochiching County, by source, for all groups, for farmers and nonfarmers, and for families and single men, 1938.**





transportation or board aid. 9/ Because so great a proportion of the cash income was from public sources, and, as will be shown later, because so many of these public expenditures were uneconomic, the lack of adequate income from productive sources is a very real problem among isolated settlers.

An even more striking picture of the inadequacy of income is obtained by segregating farmers from nonfarmers. Considering as a farmer a settler who received any income whatsoever from the sale of crops or livestock, only 25 of the 72 cases studied fell into this classification, despite the liberal definition. The remaining 47 settlers were, of course, classed as nonfarmers.

By definition, all farmers received some cash income, but among the nonfarmers 4 were without any cash income during 1938. One was said to be drawing on past earnings as a miner; the other 3 were living on savings made through recent sales of timber rights.

Table 1.-Distribution of 25 isolated farmers and 47 isolated nonfarmers by amounts of cash income from all sources in Koochiching County in 1938

Income	Total Settlers		Farmers		Nonfarmers	
Dollars	Number	Percent	Number	Percent	Number	Percent
0	4	6	0	0	4	9
1-199	13	18	1	4	12	25
200-399	24	33	6	24	18	39
400-599	19	25	9	36	10	21
600-799	6	9	5	20	1	2
800-999	2	3	1	4	1	2
1,000-over	4	6	3	12	1	2

All but one of the 25 farmers had a cash income of \$200 or more, the modal average calculated from table 1 being \$491, compared with a simple average of \$594. In general, cash income for the nonfarmers was less than for farmers. The largest number of nonfarmers fell in the modal group of \$200 to \$399, while the largest number of farmers came in the modal group of \$400 to \$599 (table 1). The modal average for the nonfarmers was

9/ Among 60 settlers who were moved from the Pine Island area, the total income in 1933 averaged \$309, of which 36 percent was derived from the sale of crops and livestock; 49 percent from forest products and miscellaneous sources; and 15 percent from relief. Strikingly similar income figures were obtained by Murchie and Wasson in their study of the Beltrami Island area in which the 1933 cash income averaged \$317. See Murchie, R.W. and Wasson, C.R. Beltrami Island, Minnesota, Resettlement Project, University of Minnesota, Agricultural Experiment Station, Bul. 334, 1937.

only \$291, and the simple average for this group was \$313. <sup>10/</sup>

A much larger proportion of the total income was classed as earned income for the farmers than for the nonfarmers--86 percent as compared with 71 percent. Forty percent of the farmers had an earned cash income ranging from \$400 to \$599, while an additional 16 percent had an earned income in excess of \$600. In contrast, 6 out of 10 of the nonfarmers had an earned cash income of less than \$200; 26 percent of the total number were without any cash earnings whatsoever (table 2).

Table 2.-Distribution of 25 isolated farmers and 47 isolated nonfarmers by amounts of cash earned income from all sources in Koochiching County, 1938

Cash earned income	Total settlers		Farmers		Nonfarmers	
Dollars	Number	Percent	Number	Percent	Number	Percent
0	12	17	0	0	12	26
1-199	17	23	3	12	14	30
200-399	20	28	8	32	12	25
400-599	17	23	10	40	7	15
600-799	2	3	1	4	1	2
800-999	0	0	0	0	0	0
1,000-over	4	6	3	12	1	2

About one-fourth of the total cash income of 75 settlers <sup>11/</sup> was from relief sources; 40 percent, or 29 settlers, received such public assistance. Thirty-two percent of the isolated farmers and 44 percent of the nonfarmers were recipients of relief during 1938. Examining the actual relief payments (table 3) to isolated settlers, it was found that all farmers who received this aid were paid \$100 or more, and that 63 percent of all nonfarmers on relief also were aided in similar amount. The nonfarmers receiving less than \$100 were principally unmarried lumberjacks. From these figures it is apparent that public assistance in the form of direct and work relief provides an important source of income for isolated settlers.

<sup>10/</sup> A similar distribution of the 1933 cash incomes for 60 settlers who have been moved from the Pine Island area shows somewhat similar results except that the incomes for this group were considerably lower at that time than for the isolated settlers now remaining at various places throughout the county (table 14, p.37).

<sup>11/</sup> Relief-income data were available for 75, instead of 72, isolated settlers.



Table 3.-Distribution of 25 isolated farmers and 50 isolated nonfarmers by amounts of cash received from relief in Koochiching County, 1938 <sup>1/</sup>

Cash from relief	Total settlers		Farmers		Nonfarmers	
Dollars	Number	Percent	Number	Percent	Number	Percent
0	45	60	17	68	28	56
1-99	7	9	0	0	7	14
100-199	8	11	3	12	5	10
200-299	8	11	2	8	6	12
300-399	5	6	3	12	2	4
400-499	2	3	0	0	2	4

<sup>1/</sup> Includes direct relief, grants by Farm Security Administration, old-age assistance, and wages in Civilian Conservation Corps and Works Progress Administration.

Partly because of the broad definitions used to classify them as farmers, this group of isolated settlers was shown to receive only 35 percent of its total cash income from the sale of farm products. (Table 4.) Even were the earnings from forest products, soil conservation payments, and trapping included as farm income, isolated farmers still received but 55 percent of their cash income from such sources. Table 4 shows the distribution of the 25 farmers according to the amounts of cash received from farm sources. Wild meats are plentiful and are utilized freely throughout the year despite legal restrictions during closed seasons. In fact, the abundance of game in the region probably accounts for the exceptionally small amount of home-produced beef, mutton, and pork. Blueberries and other wild fruits are available merely for the picking. Then, too, all isolated farmers have cows, chickens, and in most cases, good gardens. All of the farmers produced a considerable portion of their food on the farm, but because of the difficulty of measuring the importance of production for farm family consumption, no income data are included for this item. The nonfarmers on the other hand, usually do not produce much of their own food, which probably accounts for the higher proportion of this group on the relief rolls. But even the more prosperous isolated farm families are dependent upon outside sources of revenue. Table 5 shows the distribution of 72 isolated settlers by amounts of nonfarm cash earned income.



Table 4.-Distribution of 26 isolated farmers 1/ by amounts of cash income received from farm sources 2/ in Koochiching County, 1938.

Cash income from farm sources		Number of settlers		Percentage of settlers
Dollars		Number		Percent
1- 49	:	3	:	12
50- 99	:	0	:	0
100-149	:	4	:	16
150-199	:	3	:	12
200-249	:	7	:	28
250-299	:	2	:	8
300-349	:	4	:	16
350-over	:	2	:	8

- 1/ All settlers receiving any cash, however small, from the sale of crops or livestock were counted as farmers.
- 2/ For this tabulation farm income includes all cash received from the sale of dairy products, sheep, poultry, hogs, or other livestock, alfalfa, or clover seeds, potatoes, or other crops.

Table 5.-Distribution of isolated settlers by amounts of nonfarm cash earned income for 25 farmers and 47 nonfarmers in Koochiching County, 1938 1/

Nonfarm cash earned income	Total settlers		Farmers		Nonfarmers	
Dollars	Number	Percent	Number	Percent	Number	Percent
0	15	21	3	12	12	26
1- 99	11	15	5	20	6	13
100-199	11	15	3	12	8	17
200-299	14	20	4	16	10	21
300-399	8	11	6	24	2	4
400-499	5	7	1	4	4	9
500-599	3	4	0	0	3	6
600-699	0	0	0	0	0	0
700-799	1	1	0	0	1	2
800-over	4	6	3	12	1	2

- 1/ Sources included are: forest products, trapping, hunting, soil conservation payments, work on roads, school bus driving, and other miscellaneous.

From the foregoing, it is obvious that cash income among isolated settlers, in addition to being low, is derived in large measure from such nonproductive sources as relief, public assistance, and the maintenance of uneconomic public services. Furthermore, the inadequacy of income from agricultural and forestry enterprises is even more apparent when it is recognized that the total income from all sources is insufficient to maintain decent levels of living.

#### Extent of Cleared Land and Number of Livestock

Indications of the inadequacy of the productive base of isolated settlers are the extent of cleared land and the number of livestock. As cutover woodland and swampland contribute little to income, the average size of holdings is unimportant. On the other hand, the extent of cleared land is a measure of the ability of the isolated settler to produce cash crops and food and to support his family and livestock. Among isolated farmers, only 12, or 48 percent of the total number, had 30 or more cleared acres. In a recent study of another county in northern Minnesota, 30 cleared acres were considered a minimum for a satisfactory subsistence agriculture.<sup>12/</sup> Yet, over half of the isolated farmers in Koochiching County had less cleared land than that considered a minimum for ordinary subsistence. Only 6 percent of the nonfarm group had as many as 30 acres cleared, 86 percent had less than 20 acres cleared, and, except for a few small gardens, 30 percent had no cleared land (table 6).

Table 6.—Distribution of 75 isolated settlers by amount of cleared land, for farmer and non-farmer groups in Koochiching County.

Acreage of cleared land	Total settlers		Farmers		Nonfarmers	
	Number	Percent	Number	Percent	Number	Percent
0	15	20	0	0	15	30
1- 4.9	8	11	1	4	7	14
5- 9.9	13	17	3	12	10	20
10-14.9	7	9	1	4	6	12
15-19.9	4	5	0	0	4	8
20-24.9	8	10	3	12	5	10
25-29.9	5	7	5	20	0	0
30-34.9	9	12	7	28	2	4
35-39.9	2	3	1	4	1	2
40-44.9	2	3	2	8	0	0
45 and over	2	3	2	8	0	0

<sup>12/</sup> Gilcreast, Roy M. and Musbach, William F., Land Use Problems and Policies in the Cut-Over Region of Minnesota with Special Reference to Eastern Pine County, U.S. Dep. of Agr. 1939, (mimeographed).

Equally as striking is the small number of livestock. Among the 75 isolated settlers are distributed 110 cows, of which 95 are owned by the 25 settlers classed as farmers. Despite the few cows, dairy products accounted for 46 percent, or nearly half, of the crop and livestock income of the 72 isolated settlers. Although 56 percent of the farmers had herds of 4 or more cows, only 20 percent own as many as 7 cows which, with 30 acres of cleared land, was the minimum believed necessary for a subsistence income by Gilcreast and Musbach in their study of eastern Pine County, Minnesota, a county in which prices and markets are comparable with those of Koochiching County, 13/ Twelve percent of the farmers had no cows and only 2 percent of the nonfarmers had herds of 4 or more.

In addition to milk cows, 82 heifers, calves, and other cattle were distributed among the isolated settlers. Only 6 settlers reported sheep in flocks averaging 32 head; 27 owned horses, usually 2 each; and only 3 had hogs. Poultry contributed an average of \$20 cash income per isolated farm, but the average income from poultry for the entire group of settlers was but \$7. Only 22 places, including 5 nonfarm holdings, reported chickens; and in these holdings the average flock of hens numbered 27.

Thus, in terms of cleared land and numbers of livestock, isolated settlers have insufficient farming resources from which to derive a substantial cash income; so it is not surprising that the income figures are low even after cash derived from other sources is included.

### Indebtedness

Of the 43 owner-operators interviewed, only 7 reported mortgages ranging in amount from \$165 to \$2,000. 14/ When contemplating the relocation of isolated settlers, the extent of the owner's equity is a most important consideration. If a so-called owner has no real equity, his status is very similar to that of the tenant or squatter, and the amount of financial assistance needed will be as great as in the relocation of nonowners.

Other large debts consisted principally of grocery and doctor bills and sums owed the Farm Security Administration for loans on livestock. Although these debts totaled \$4,704 and averaged \$65 for each of

13/ Gilcreast, Roy M. and Musbach, William F. Ibid.

14/ Based on schedules obtained from 60 settlers in the Pine Island purchase area (who have since been relocated), it was learned that 20 of the places were mortgaged for a total of \$11,725 or an average of \$586 each. All of the land and buildings occupied by the 60 settlers was estimated to have a value of \$65,500. The largest mortgage was \$2,000 and the smallest \$30.



of the 72 cases studied, actually they were owed by only 12 persons for whom the average debt was \$392. Eight of these 12 persons owed less than \$200; one owed \$400; one, \$800; and two, more than \$1,000 each. These debts, like mortgages, are important in a relocation program for they indicate the extent, if any, to which rehabilitation will involve debt adjustment.

#### Tax Delinquency

Data were tabulated for 53 isolated tracts in which there were 7,302 acres and on which were located 57 of the 75 settlers interviewed. <sup>15/</sup> Taxes have been paid through 1937 on 33 of these tracts, and are delinquent 1 or more years on 20 tracts. Total delinquency is \$1,956, compared with the 1938 levy on the 53 tracts of \$1,303, <sup>16/</sup> or, for every dollar of the 1938 levy, \$1.50 is delinquent.

If it is assumed that only the 33 who have paid their taxes through 1937 will pay the 1938 levy before it becomes delinquent on January 1, 1940, only \$801 will be collected. Since 6 of the 20 who are in arrears are behind only 1 year, 4 for only 2 years, and 6 for only 3 years, it is probable that one-half of the delinquents will keep their lands from reverting to the State; and thus more than \$801 will be collected. Nevertheless, tax levies are apparently a burden which isolated settlers find difficult to bear.

#### Tenure Status

Of the 37 families contacted, 25 were owners, 7 were renters, and the remaining 5 were squatters. Two of the squatter families were on publicly-owned, tax-reverted lands, while the other 3 had built shacks or had occupied vacant buildings on private land. Three of the squatter families had nonfarm enterprises and were engaged principally in the cutting of timber. Among the 38 <sup>17/</sup> single men considered

<sup>15/</sup> Of the 18 remaining settlers, 9 are squatters on publicly-owned land and 9 are squatters on privately-owned land. The latter are on large holdings, the entire acreage of which cannot reasonably be attributed to them for their use; therefore, they are omitted from this analysis.

<sup>16/</sup> A 1938 levy of \$80 in personal taxes is not included in these figures.

<sup>17/</sup> Lumberjacks who were obviously transient were omitted from the study.

permanently located, 18 were owners, 2 were tenants, and 18 were squatters on either public or private land. <sup>18/</sup> Vacant buildings, on State as well as on private land, are standing invitations to homeseekers. At least 9 houses on State-owned land in Koochiching County are occupied and the residents are paying no rent for the use of the house or land. Because of their poor housing, unmarried lumberjacks are locally referred to as shackers. From these figures it is evident that a large number of isolated settlers has no legal tenure status whatsoever. In a few cases, besides being trespassers, squatters are removing valuable timber from either public or private lands.

### Nativity, Age, and Mobility

Any relocation program must give serious consideration to the desire of people to be with groups of homogeneous extraction, to the inability of older settlers to make necessary adaptations to new environment, and to the mobility of younger people in seeking opportunities better than those in Koochiching County. Fortunately, no clannishness serious enough to be an obstacle to relocation of individuals was found. Only a few of the isolated settlers were either aliens or foreign-born citizens. According to the 1930 census, only slightly over a third of the county's population was of foreign-born or mixed parentage, and the nativity of the isolated settlers is typical of the county as a whole. In addition to those of American and unknown nativity, the isolated settlers are derived from 15 European stocks, but no one group appeared to be more isolated than another, nor was any discord or friction found among them. Table 7 shows clearly the heterogeneous cultural and political backgrounds of the settlers studied.

Advanced age is a serious handicap for a settler whose relocation entails much hard work incident to the establishment of a new home. Thirty-four of the 37 households are headed by men of an average age of 51 years, ranging from 22 to 73. Only 21 percent of these men are under 40 years of age, while 40 percent are over 60. According to life expectancy tables <sup>19/</sup> these 34 men may be expected to live an average of 22 years. The average age of the wives, including 3 widows who are heads of their households, is 42 years. The married women may be expected to outlive their husbands by 10 years, based on similar calculations. This being true, the problem of isolation will be more acute after the men die, leaving their aged widows in these remote places. The average

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<sup>18/</sup> It has been possible to account for the tenure status at the time of purchase of 94 families and single men in the Pine Island purchase area who have been relocated by the United States Department of Agriculture. A large majority, 82, were owners; 8 were tenants, and 4 were merely squatters or shackers.

<sup>19/</sup> The World Almanac, p. 273, New York World Telegram, 1938.



Table 7.-Country of extraction of isolated settlers  
in Koochiching County 1/

Country of extraction	Number	Percent
Norway	22	19
Sweden	22	19
England	17	15
Scotland-Ireland	17	15
Germany	12	10
Finland	7	6
France	5	4
Denmark	3	2
Netherlands	2	2
Poland	2	2
Jugoslavia	2	2
Austria	1	1
Belgium	1	1
Lithuania	1	1
Switzerland	1	1

1/ This compilation includes those in the Pine Island purchase area who have been relocated in addition to other families scattered over the county.

age for the unmarried men is even greater than for the heads of families. Ranging from 31 to 79, the bachelors average 59 years with less than 8 percent under 40. Fifty-five percent are over 60, and 15 percent are over 70. The entire group of single men enjoy an average life expectancy of only 16 years. Clearly, the advanced ages of many of the isolated settlers precludes their relocation on a farm. Yet, they should not be left in their present locations. Because of their need for medical service and their inability to travel long distances, resettlement in or near towns and villages seems most desirable.

Although advanced age may in time solve part of the problem of isolated settlement, the mobility of children will determine in large measure whether or not isolation continues from generation to generation. Forty-four percent of all boys over 18 years of age have left home, while 88 percent of the girls over 18 have moved away from their families. Forty percent of those children who have left still remain within the county, 30 percent are elsewhere in the State, and the remaining 30 percent are scattered in California, Oregon, Washington, Iowa, Illinois, Wisconsin, and Canada. One young man migrated to his parent's native home of Finland. Insofar as the children are concerned, a large number are solving their own problem of isolation. Nevertheless, with 56 percent of the boys over 18 years of age still at home, there is the strong possibility of perpetuation of many of the isolated homesteads,



because in each household there is usually one young man who expects to continue living at the old place, to marry, and to rear a family.

Significant, also, in a study of isolated settlement is the extent to which such settlement is permanent or transient. Wehrwein found a direct correlation between the length of residence and the economic status of the settler. <sup>20/</sup> The longer the occupant had lived on his place, the larger was the acreage owned and the land cleared. Furthermore, Wehrwein found that income increased with length of residence, the income being 4 times as large for those living on their place 21 years or more as it was for those in residence 6 years or less. Although the data gathered in this study were insufficient to make such a correlation, a tendency similar to the correlation found in Wisconsin was noted. The 37 families studied were in their present location for an average of 16 years. While the isolated farmers were in their residence an average of 19 years, the nonfarmers were located on the present site only 13 years.

#### Education

Another factor limiting the scope of a relocation program is the education of isolated settlers. Fortunately, all cases interviewed were literate, a large majority having a complete or nearly complete elementary education. Family heads finished an average of 7.2 grades, while their wives had a complete primary schooling. <sup>21/</sup> The unmarried men, however, averaged but 6.3 elementary grades. No man had gone beyond high school, and only one woman finished a year of college training. Because of compulsory education and a better school system, the children have had more schooling than their parents.

Among the children who have left school, the boys finished an average of 8.3 grades while the girls averaged 9.4 grades. None of the boys went to college; and of the 3 girls who attended such institutions only 1 graduated and the other 2 were enrolled but 1 year. Consequently, even though the education of isolated settlers and their children is well below the high school level, it appears sufficient for their successful relocation on better land or in more accessible areas.

<sup>20/</sup> Wehrwein, George S. "The Economic Status of Isolated Settlers in the Cut-Over Area of Wisconsin", The Journal of Land and Public Utility Economics, p. 187, May 1939.

<sup>21/</sup> The data for the settlers formerly living in the Pine Island area show practically the same educational achievement as was found for the isolated settlers still in the county; 7.3 grades completed for men and 7.3 grades for women. None of this group went beyond high school.

### Levels of Living

Although no attempt was made actually to measure the levels of living experienced by isolated settlers, data were secured on housing conditions and the ownership of automobiles, telephones, and radios in order to indicate roughly the degree of isolation and the lack of adequate housing. Forth-six percent of the families lived in houses of frame construction, 30 percent in frame-and-tar-paper buildings, and 24 percent in log cabins. Only 27 percent of these family structures could be rated as "good"; 46 percent were "fair", and 27 percent were "poor". Fifty-three percent of the unmarried men, on the other hand, were living in log cabins, 20 percent lived in tar-paper shacks, and only 27 percent had frame houses. Furthermore, only 3 percent of the bachelors' structures could be rated as good, 42 percent were considered fair, and 50 percent were poor. Tables 8 and 9 contain data indicating the type of construction and condition of dwellings for settlers covered in this study and for 57 families moved from the Pine Island area.

Table 8.-Type of construction of 132 dwellings for specified groups of settlers in Koochiching County.

Group	: Log construction : Percent	: Frame construction : Percent	: Frame tar-paper construction : Percent
37 isolated families	: 24	: 46	: 30
38 isolated single men	: 53	: 27	: 20
57 scattered families moved from Pine Island area <u>1</u> /	: 56	: 40	: 2
Average all groups	: 48	: 38	: 13

1/ One house in this group was of stucco construction.

Table 9.-Condition of 132 dwellings for specified groups in Koochiching County

Group	Condition of dwellings		
	Good Percent	Fair Percent	Poor Percent
37 isolated families	: 27	: 46	: 27
38 isolated single men	: 8	: 42	: 50
57 scattered families moved from Pine Island area	: 16	: 54	: 30
Average all groups	: 15	: 49	: 36



Automobiles, telephones, and radios obviously lessen the hardships of isolation, and from the individual settler's point of view, such conveniences actually increase the physical distance from neighbors which he can tolerate before becoming "isolated". While 28 of the 37 families enjoyed serviceable radios, only 4 of the 38 bachelors had sets in usable condition. Automobiles were equally abundant among the families and equally scarce among the single men. Distributed among the 37 families were 29 cars, whereas there were but 8 among the 38 unmarried men. Telephone service was lacking among both groups since but 10 families and only 2 single men had this convenience. Three families and 29 bachelors were without automobiles, telephones, and radios. Only 6 families had all 3 items and only 18 enjoyed 2 of the three. No unmarried man had all three, and only 2 had as many as 2 of the conveniences.

None of the isolated settlers had commercial electric power, but 2 families had home-constructed, windmill-operated generators.

#### Attitudes of Settlers Toward Relocation

Naturally, extremes of attitudes toward relocation were freely expressed. Some settlers indicated that nothing short of force would move them, whereas others were obviously anxious for a chance to re-settle in a better location. The majority, however, seemed to be content with their present residence but were willing to move to better locations. The reticence toward relocation on the part of the latter group was due principally to the attitude that they were "making a living" on their present farms but that, unless the new location was really better, they could not be sure of their future income. Another restraining influence was the unwillingness on the part of the settlers to go into debt; these settlers object strenuously when a debt-ridden future is suggested for them. Some persons were unwilling to sell therefore, unless they could be assured new properties at the same price received for their old homesteads. Others felt that "trading" would be impossible because of the high price of good, well-situated agricultural land.

Because of the hardships of isolation and the need for frequent medical service, some of the older settlers wished to leave after their children should grow up and be able to make their own way. Such persons would be willing to sell or exchange their lands for small places on good highways, close to villages. One old couple wished to operate a tourist camp, but most of the older settlers wanted small retirement homes with only enough land for gardens.

Although many families who found themselves in poor locations managed to move, a few new families have gone in to isolated homesteads. In general, however, the movement of population has been out of the isolated areas. Four isolated Koochiching County families have moved voluntarily in the last 12 months because of poor roads, lack of snow



plowing, and the difficulty of getting their children to school. One settler, however, who moved to his present location from an even more isolated location, indicated the need for guidance in relocation when he said, "I thought I was getting into civilization, but I guess I didn't move quite far enough".

Although a few of the settlers who said they would never move are probably "bluffing" in the hope of extracting higher prices for their properties, some are sincere in believing their homesteads to be worth more than public agencies are willing to pay. By adding to the original cost of the tract, the cost of buildings and land clearance, settlers often arrive at an unusually high figure for the "value" of their holdings. Actually, Federal appraisers found that many tracts in the Pine Island purchase area had no agricultural value. <sup>22/</sup> (See fig. 6.) Yet, when an owner has spent 50 to 75 dollars per acre clearing such land, it is extremely difficult to convince him that it has no value.

Despite the assumption that isolation is universally considered undesirable by settlers, some cases were found in which the conditions imposed by sparse settlement were welcomed. Four or 5 men indicated that they liked their locations because "nobody bothered" them--meaning simply that they wished to be alone. In general, the women were more dissatisfied with isolated settlement than the men, but both were generally rather cordial to the interviewer who was welcomed as a visitor from the "outside". That isolated settlers wanted attention from persons interested in their welfare was readily apparent by the cooperative spirit in which they provided facts concerning their homestead.

#### PRIVATE COSTS OF ISOLATED SETTLEMENT

In previous studies of isolated settlement, the individual costs have not been adequately considered, so great was the emphasis on the "public" costs for essential services. Private costs appear as inconveniences and hardships resulting from poor roads and poorly-equipped homes, lack of social contacts, and direct money outlays for snow plowing and transfer of products to or supplies from the markets. As the cash income of isolated settlers is low, expenditures for ordinary conveniences are out of the question, and, where such conveniences depend upon electric power, they cannot be used. Isolation in itself excludes the possibility of rural electrification even were the families able to use and pay for such service at prevailing rates. As has been shown, telephone service is enjoyed by only a very few isolated settlers, principally because of the cost of erecting lines and maintaining service during the severe winters. Breaks in the lines occur so

<sup>22/</sup> Wilson, A.D., "Settler Relocation: A Description of the Minnesota Plan." The Journal of Land and Public Utility Economics, Vol. XIV, No. 4, p. 409. November 1938.

often during the winter that few families can be sure of dependable service. Most of the isolated families get their mail 3 times a week on regular rural-delivery routes; but, since their tracts are located back of these routes, they must travel an average distance of 3 miles to their boxes, and a few must go as far as 9 miles. Some families get mail only once a week; others call at the post office whenever convenient. One family terminated its subscription to the New York Times because, during the long winters, it was impossible to call at the post office more than once or twice a month and the accumulation of papers was cumbersome to carry home on snowshoes.

Distance to neighbors, grocery stores, doctor, church, school or school-bus route, shipping point, and, most important, to an all-weather road is an important measure of the cost of isolation. Great distances are translated into high costs both to the tax payers forced to foot bills for public services and to the individual settler who must bear the costs in the conduct of normal, everyday activities.

The 37 families lived an average of 1.5 miles from an all-weather road, and the 38 unmarried men had an average of 2.9 miles to travel to year-round passable roads. Only 12 of the 75 settlers were on an all-weather road. The extreme distances from an all-weather road are 10.5 miles for 2 of the single men and 7 miles for 1 of the families. Eight percent of the families and 15 percent of the unmarried men live 5 miles or more from an all-weather road, but 60 percent of the families and 30 percent of the bachelors live within 1 mile of a road which is open throughout the year.

Before being relocated, 1 family in the Pine Island purchase area was 20 miles from an all-weather road; several others were 15 miles. Table 10 gives the average distance from several community facilities for this group as well as for the 75 settlers being studied. In 1934, when data were obtained for the settlers to be moved from the Pine Island area, only 49 percent were within 1 mile of an all-weather road, while 35 percent were more than 5 miles from a road open throughout the year (table 11). No doubt, roads have been improved during this 5-year interval; statements of the interviewed settlers and ordinary observation would indicate that the 37 families and the 38 single men were as bad or worse off with respect to roads 5 years ago than the scattered families who have already been resettled.

From the individual settler's standpoint, distances are a serious handicap in many ways. Very few of the women are satisfied with their isolated location and lack of contacts; neighbors are too far away, averaging 2.6 miles for the 37 families and 2.8 miles for the 38 single men. Visiting with friends and neighbors, doing things in groups, and seeing new people and new places are all natural wants of gregarious humans who are not satisfied in isolated areas. Wehrwein and Baker note that one of the worst features of the lack of contact with others is the absence of incentives to maintain high standards of living and





Figure 6. - In addition to clearing the land of trees, some settlers have toiled long hours to remove stones, and still many of the isolated farms have little or no agricultural value.



Figure 7. - An isolated settler, whose farm is accessible only by boat, coming across the river to meet the interviewer.





Table.10.-Average mileage from homes of isolated settlers in Koochiching County, to specified community facilities

[illegible]

Table 11.-Frequency distribution showing severity of isolation as measured by distance from the nearest neighbor and an all-weather road for 37 families, 38 bachelors, and 55 Pine Island settlers (now relocated), Koochiching County.

Isolated by distance of:	Percentage of settlers living at indicated distance from			Percentage of settlers living at indicated distance from		
	Nearest neighbor	All-weather road		Nearest neighbor	All-weather road	
1 mi. or less:	37 Families: 38 Bachelors	55 Pine Island settlers	37 Families: 38 Bachelors	55 Pine Island settlers	37 Families: 38 Bachelors	55 Pine Island settlers
1.1 to 2 miles:	Percent	Percent	Percent	Percent	Percent	Percent
2.1 to 3 "	35	66	60	30	49	
3.1 to 4 "	32	16	24	25	2	
4.1 to 5 "	14	6	8	18	7	
5.1 miles and over	0	6	0	3	5	
	5	4	0	9	2	
	14	2	8	15	35	

conduct. The public welfare demands decent standards of living, health, and morality, but when no one sees the house and the individual's conduct, little stimulus exists to remain "respectable". <sup>23/</sup> One declared, "I wouldn't know how to act if I moved out where I could see other people every day." Her long isolation might make adjustment to normal society somewhat difficult.

Sixty-five percent of the families and 82 percent of the unmarried men live more than 1 mile from the nearest neighbor; 14 percent of the families and 12 percent of the bachelors live more than 5 miles from the nearest neighbor.

Most of the unmarried men, who were principally old lumberjacks, were dissatisfied. Their main objection to living in isolation was that they got very lonesome. Some may have enjoyed being alone when they were younger and able to get about with ease. Typical, however, was the statement of one old fellow who said, "It got so lonesome up there I couldn't stand it any longer."

Some families have difficulty getting out to the grocery store in the winter time, the average distance being 9.9 miles for the families and 11.5 miles for the single men. Including 55 former settlers in the Pine Island area with these 75 cases, the average distance to a grocery store is 10.9 miles, although some of the families live as far as 30 miles. The problem here, of course, is not so much one of distance as it is the type of road.

Services of a doctor to isolated families are quite expensive. Distance is measured in dollars instead of in miles. One man replied to the question, "How far is it to a doctor?" by answering, "Thirty dollars." The usual fee for a doctor is \$1 per mile, and the average isolated family is 24 miles from a doctor, while the single men average 27 miles. The average distance from a doctor for the 37 families, 38 single men, and 55 former settlers in the Pine Island area is 25 miles. Fifty-two percent of the 37 families, 58 percent of the 38 single men, and 40 percent of the cases in the Pine Island area are more than 25 miles from a doctor.

Isolation means inadequate marketing facilities. Why keep several milk cows if the milk or cream cannot be sold? Why grow grain if it is impossible to have it threshed? Why grow crops if they cannot be marketed? Here again distance is only one measure of the cost of isolation, since the type of road also determines accessibility. Many families in Koochiching County sell cream and make a profit, although they live as far as 20 to 30 miles from the market, but such families

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<sup>23/</sup> Mehrwein, George S. and Baker, J.A., "The Cost of Isolated Settlement in Northern Wisconsin", Rural Sociology, September 1937, p. 258.



are on the main roads or in settled communities where it is profitable for a truck to call regularly for their cans of cream. A few families near the railroad find it possible to ship their cream to St. Paul, approximately 300 miles away. On the other hand, many isolated families do not find it profitable or practical to sell cream even though they live less than 10 miles from the market or from the road traversed regularly by a truck that hauls cream. Such families, in addition to being isolated, are scattered and live back from the main roads where it is too expensive, or actually impossible because of poor roads, for trucks to call for one small can of cream. Likewise, it is either too costly or too difficult for the individual to deliver small quantities of cream to market. The average settler who sells cream must carry it  $4\frac{1}{2}$  miles to the point where the cans are picked up by a truck. Isolated settlers cannot get a thresher to come to their farms for a small quantity of grain or, if the roads are bad, even a relatively large quantity, so most of them do not grow any grain crops.

One isolated settler indicated that he could not sell much wood because of the difficulty of getting it to market. Once after selling a load he woke up the next morning to find the roads blocked with snow and delivery impossible. Several of the isolated settlers manage to sell some pulp, ties, or fence posts, but the market for these products is at an average distance of 29 miles.

As all of the roads cannot be snow-plowed at public expense, some of the isolated settlers have to open their roads. One or two examples will show the expense of living on isolated roads. One farmer, using a caterpillar tractor left over from logging operations, spent several hours and expended \$15 to open his road last winter in order to visit the county seat; another family spent more than 2 days shoveling out  $1\frac{1}{2}$  miles of road so that the mother could be taken to the doctor.

Farmers' organizations, 4-H clubs, churches, and other institutions are either nonexistent or neglected in the isolated areas. The 3 isolated farmers who belong to a farmers' organization seldom attend the meetings because of distance. One mother was anxious for her sons to take part in 4-H club activities, but because of the distance to the meetings they could seldom attend. As the church of their choice is at an average distance of 11.7 miles for the 37 families and 14.6 miles for the 38 single men, few if any of the isolated settlers ever attend religious services.

The children of some isolated settlers are boarded in homes near the school. While the outlay in dollars is a public cost financed largely through State aid, private costs are an important disadvantage to this arrangement. As the children live in strangers' homes and as the parents cannot have proper supervision, settlers dislike having to board their children, especially the younger ones. A few families favor the arrangement because it costs them very little to feed their children during the school year. As the county pays the board only for the days the children are present in school, the parents must bear the

board expense when their children are absent for illness or other reasons, and for the many weekends when bringing the children home is impossible because of weather or road conditions.

The private costs and disadvantages must also be taken into consideration along with the public costs, if for no other reason than that they may contribute indirectly to public costs. This is certainly a possibility in the case of relief and health costs. If the low income of the isolated settler is due to his inability to market cream or crops or to get grain threshed, he may need relief. Probably some of the families now on relief would need relief regardless of their location, but certainly many such families could be self-supporting elsewhere. Low incomes may also make it impossible for the isolated families to maintain decent health standards, thus making necessary the expenditure of public funds for health purposes.

#### PUBLIC COSTS OF ISOLATED SETTLEMENT

Isolated settlers as legal residents of the area are, of course, entitled to roads, schools, public health service, and, when necessary, to relief and old-age assistance. Because of the high cost of these services, much of the burden must be borne by tax payers other than the settlers themselves through the contributions of the county, State, and Federal Governments. Although under a democratic society it is just that public services be equalized without regard to tax contributions, yet, when "deficit areas" incur costs obviously unreasonable and uneconomic, society must bring about some readjustment. This part of the report is concerned with a measurement of excessive costs due to isolated settlement and with a determination of the extent to which savings might be made by relocation.

##### Roads

The history of northern Minnesota indicates that as soon as a few settlers were located in an area, roads were demanded and often built for one or two families. Land companies often placed their first settlers in the remote areas of their holdings, thus contributing to isolated settlement and the demand for more miles of roads and costly bridges. Although many of the original settlers have moved, and some roads have been abandoned, there are many instances in which one or more families continue to live at the end of a costly road maintained principally for their exclusive use. The high cost of roads naturally is not borne entirely by those benefited, but, on the contrary, monies from outside sources are paid as maintenance to the individuals living on these roads. For example, 22 of the 75 isolated settlers received \$1,420 in 1938 largely for work on these roads. Although their cash incomes were increased only by this amount, their total road expense was even greater.

Obviously, roads for isolated settlers are very expensive to build and maintain. Although actually on a mileage basis, large amounts are not spent on the roads of isolated settlers, but the per capita cost is



excessive. In some areas, road expenditures have dropped because local officials are "going slow" where depopulation is proceeding normally or through land purchase and exchange programs.

Eighteen of the 76 isolated settlers have  $33\frac{1}{2}$  miles of trail and logging road; a few have no road at all. At least 3 must use a boat to reach their homes. They have motorboats. (See fig. 7 ff. p. 23) Nine settlers have  $24\frac{1}{2}$  miles of road where the right-of-way has been cut, ditched, and perhaps graded, yet most of these roads are impassable during half the year. Eight families are on State highways, and 40 settlers have  $54\text{--}3\frac{3}{4}$  miles of graveled or partly-graveled roads. In 1938, 49 miles of the graveled or partly-graveled roads cost \$2,447 <sup>24/</sup> for maintenance and snow-plowing. These 49 miles of road were used almost exclusively by 35 isolated settlers for whom the "excessive" road costs averaged \$70. This cost is in addition to normal outlays for the county, State, and Federal highways which were needed and used by the isolated settlers as well. Jesness and Nowell found that 13 isolated families in St. Louis County were responsible for excessive road costs averaging \$91 per family in 1932. <sup>25/</sup> Road and maintenance costs are high in the isolated areas, but where school children live on isolated roads that must be kept clear of snow for the school bus, total public costs mount rapidly.

No data are available on the original cost of roads to isolated settlers, and it is impossible to obtain reliable estimates. Many roads were built by the townships, and often much of the labor was donated by the settlers themselves, who worked for nominal wages in order to get the road constructed. According to the county engineer, the original cost of roads should be amortized over a 30-year period, which is considerably shorter than the period used in other parts of the country where weather conditions permit less sturdy construction and require less maintenance. Assuming the roads were originally built for as little as \$300 a mile, the annual cost above maintenance would be \$550 for the 40 settlers having  $54\text{--}3\frac{3}{4}$  miles of road.

As the money spent cannot be recovered, the cost of old roads is of relatively little concern but where settlers are demanding new highways for practically exclusive use, there is need for concern. At present, 3 of the 75 settlers studied are "putting on the pressure" for road construction, and in 2 cases the right-of-way has been cleared. According to estimates of the county engineer  $3\text{--}1\frac{1}{2}$  miles of road for these 3 families will cost \$11,500 for construction and \$300 annually for maintenance. The 1932 levy on the 3 tracts was \$52.92 of which only \$23.47 has been paid on 1 tract; curiously enough the sole income of the settler who paid the \$23.47 is from relief sources. The other 2

<sup>24/</sup> Data supplied by the county engineer.

<sup>25/</sup> Jesness, O.B. and Nowell, R.I. A Program for Land Use in Northern Minnesota. The University of Minnesota Press, Minneapolis, 1934, p.141.



tracts were delinquent for 1936 and 1937, the total delinquency amounting to \$70.84. Construction of usable roads to the other 24 isolated settlers without good means of access would cost an estimated \$218,000.

### Schools

The State of Minnesota is bound by law to give every child within its borders an elementary schooling, and insists on fulfilling this obligation by enforcing compulsory attendance. In the southern part of the State the population is dense enough to supply a sufficient number of children per school, and the buildings can be located at walking distance for most of the children. In Koochiching County, however, the population is too sparse to justify a school within walking distance of every child. The isolated families live an average of 9 miles from a grammar school, 13.4 miles from a high school, and 3 miles from a school-bus route. Until 1932, as an attempt was made to school children near their homes, many buildings were constructed with only a few pupils per teacher.

When the schools were consolidated, it became necessary to transport or board the children. (Fig. 8.) Sparse settlement makes school-transportation costs high in Koochiching County, but statistics show that by closing 18 rural schools and transporting the children to consolidated schools, expenses were reduced from \$142 per pupil enrolled in 1931 to \$95 in 1932. <sup>26/</sup> The 1938 cost per pupil enrolled was \$95, only slightly higher than the State average.

The following quotation indicates the severity of the problem confronting school officials when children of school age live several miles from a school bus route:

"Some time ago an article appeared in the Minneapolis Star stating that we were paying a family at Fairland \$450 per year to transport his children to a bus route so that they could be enrolled in one of our consolidated schools.

"The family to whom this transportation bill was paid, lives at Fairland, about 9 miles from the end of our bus route. The condition of the road between the regular end of our route and Mr. \_\_\_\_\_ place is such that it would be impossible for us to send the bus up to his home. Mr. \_\_\_\_\_ had 5 children who were of school age and we were confronted with the problem of providing school facilities for this isolated family. We either had to create a school for this family at Fairland, board them out, or pay the father for transporting them.

<sup>26/</sup> These data do not include the schools of International Falls, Holler, Ray, and Hanier.



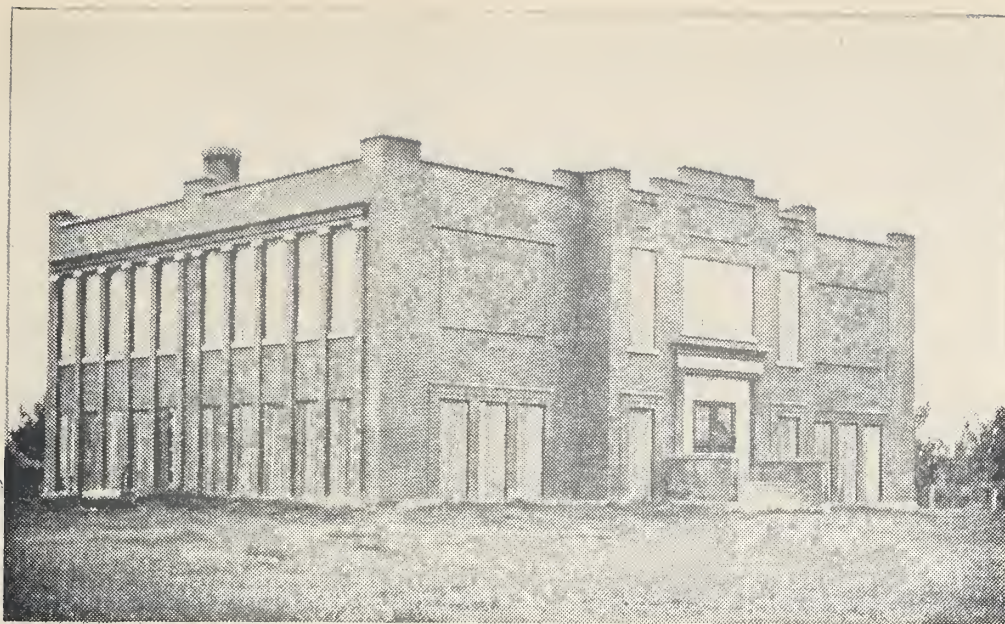


Figure 8. - This and many other good school buildings have been abandoned in an effort to establish an efficient and economical consolidated school system.



Figure 9. - Public costs are increased as a result of fire hazards when isolated settlers clear land by burning.





"Certainly, we could more economically pay the father for transporting his children out to the bus route than we could provide a building, maintain it, heat it, equip it, and employ a teacher for the education of this one family. If we had employed a teacher ..., the salary of the teacher alone would certainly have been as much as the amount paid the father, to say nothing of the additional cost of desks, maintaining the building, providing the fuel, and providing the building itself.

"... We have several cases similar to this case, and it is either allow the father a sum of money that will pay for his transporting these children out to a regular route or to provide a school building for the family." 27/

Eleven of the 18 families covered in this survey with children of school age were so located that it was necessary to pay a total of \$1,902 in special transportation or board aid in 1938-39, averaging \$173 per family. Special transportation costs attributable to 28 isolated families in St. Louis County for the school year 1931-32 averaged \$186 per family. 28/ Although in earlier years, according to the county superintendent of schools, some families moved into isolated sections during the school year in order to get the board or transportation aid, the practice no longer exists, but attempts are made now and then, as evidenced by the following:

"A man living 3 miles from a school bus route came to me and asked what we would pay him for transporting his children to the bus line. I told him that the best we could do was \$20 per month. He replied, 'My gosh! I can't afford to live out there for that!' " 29/

If all of the isolated families of Koochiching County were to remain in their present locations, and if present policies and rates with respect to transportation and board aid continue, \$12,985 in special aids will be required to give the children an elementary education; and if all of the children are graduated from high school an additional \$8,856 will

27/ Kohlhasse, J.C., County Superintendent of Schools, Koochiching County. (Letter to the writer, July 15, 1939.)

28/ Jesness, C.B., and Nowell, R. I. Op. cit., p. 140.

29/ Kohlhasse, J.C., County Superintendent of Schools, Koochiching County. (From stenographic notes of land-use planning meeting, Koochiching County Court House, October 24, 1938.)

be needed. These figures do not take into account possible changes in the number of children due to births or deaths, or to the possibility of voluntary movement of families out of the isolated areas or of new families moving into isolated locations. ...

#### Other Costs

Isolation also adds to the public expense when a county nurse must visit remote places to which driving is difficult or impossible. Not only are costs great for travel over long distances, but for time lost as well, especially when part of the distance must be covered by foot. The public cannot justly escape the cost of maintaining health standards, but it can and should encourage or regulate the distribution of population so as to facilitate the economical and adequate provision of these services.

Public costs for the county agricultural agent's services in isolated areas are similar to those for the county nurse. Often the isolated settler receives no benefit from the county agent, who seldom can find time to visit remote areas. Likewise, the cost of home economics extension, 4-H club work, and vocational agricultural training is increased because of the distances and time involved. Election costs and costs of property assessment are higher in isolated areas.

Public costs of isolation are further increased by the fire hazards caused by settlers who clear land by burning. When fires here get out of control, valuable private and public forest lands are destroyed, roads whose grades are constructed of inflammable peat are ruined, and the settlers themselves are often marooned. (See fig. 9 ff. p.30) Much of the expensive forest-fire patrol work could be eliminated were settlers relocated in less hazardous areas. Many other costs, difficult to measure, arise because of the difficulty of maintaining rural mail delivery, and of enforcing game and other laws.

Public costs are sufficiently excessive in the isolated areas of Koochiching County to justify relocation even were no private costs and hardships involved. When all the disadvantages of isolated settlement are carefully considered, a program of some sort seems to be imperative.

#### ROLE OF RELOCATION AND RURAL ZONING IN A SOLUTION OF THE PROBLEM OF ISOLATION

A complete, long-time land-use readjustment program including rural zoning, retirement of submarginal land, relocation of isolated settlers, agricultural conservation and rehabilitation, and an economic forestry program, is needed in Koochiching County. 30/ Two measures, relocation and rural zoning, are immediately necessary for an adequate solution of the problem of isolation. Although a program for relocation of isolated settlers

30/ Musbach, W.F. and McMillen, R.E. Op. cit.



will show the most immediate benefits both to the individuals aided and to the local units of government, rural zoning is an important complement to this undertaking and is needed to insure a lasting solution to the problem.

Of course, some instances of isolation are more aggravated than others in the hardship suffered and in the strain caused to public finance structures. Furthermore, although a few settlers do not appear to present acute problems now or are perhaps not likely to do so in the near future, others will probably develop into costly burdens to local government within a few short years. As the most pressing cases should receive attention first, criteria are necessary which public officials can use in preparing a list of priorities for relocation. 31/ From this study it appears that the following considerations are most important in determining the order of resettlement of isolated settlers:

(1) Is the settler causing or likely to cause, within the next 2 years, excessively high expenditures for roads, schools, relief, or other essential services? If so, to what extent will relocation eliminate such costs?

(2) Is the settler a serious fire hazard in his present location?

(3) Is the settler so advanced in age or in such poor physical condition that failure to relocate will cause excessively high public costs for relief, medical attention, or old-age assistance?

(4) Is the settler on poor agricultural land or so far removed from market that relocation on good land would both reduce public costs and increase private income?

(5) Is the settler an illegal squatter on State or Federal land?

Naturally, some settlers will fall logically into more than one classification, and when they do, a decision as to priority will depend on a careful analysis of the individual case. In general, however, relocation should proceed in the order in which settlers fall into the five groups indicated above.

Rural zoning is primarily a directional measure for insuring the development of a proper land-use pattern and for preventing the introduction of new, unwise land uses. As it is never retroactive in its application, zoning alone can do little to correct present isolated settlement problems of many people of Koochiching County. Relocation, aided and guided by public agencies, is the principal instrument that can be used to solve or alleviate present problems of isolation. (Fig. 10.) On the other hand, zoning can be used to insure that people relocate on good

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31/ A priority list has been prepared by the author for use by the county officials.



land and to prevent the development of new instances of isolated settlement. Relocation and zoning are, therefore, integral and complementary parts of a long-time land-use program for the county. Actually, this land use program has already been inaugurated. When the people, using materials and information prepared by technicians, classified the lands of their county, a start toward rural zoning was made. At the time the classification was made, counties in Minnesota lacked the authority to zone rural lands, so the resulting map was merely advisory in nature. As soon as the county adopts a zoning ordinance under the recent enabling act, 32/ the classification will be legally effective.

The board of county commissioners, using the classification, has already determined that the sale of tax-forfeited lands intended to be used for farming be confined to those areas classed as suitable for agriculture. This is commendable, but it is only the beginning of a complete, long-time program necessary to control and direct the use of land in the public interest. Thousands of acres of privately-owned land in the areas classified as nonagricultural are subject at present to occupancy for any legal use the owner may wish. Rural zoning, by prohibiting permanent residence or the pursuit of agriculture in nonagricultural areas would serve not only to reduce the public costs incident to isolation on poor land, but the private costs as well. As has been shown, isolated settlers are usually on poor land, suffer from low incomes, lack proper and necessary social contacts, and have costs disproportionate to their income.

The enactment of a zoning ordinance will not solve the problem nor put an end to the work necessary to insure proper land use. Administration and enforcement of the ordinance require careful and conscientious effort on the part of local officials. Zoning is a continuous process, for as changes occur in the agriculture, industry, and population of the county, amendments to the ordinance and changes in the classification boundaries will be required. 33/

Although zoning has been employed for many years in the successful regulation of urban land-use, its application to rural areas is relatively new. Despite the fact that they have had the authority to zone their lands for only 10 years, 26 northern Wisconsin counties have already planned, developed, and enacted comprehensive, county-wide ordinances which officially close more than 5 million acres of land to further agricultural development and legal settlement.

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32/ Minnesota Statutes of 1939, ch. 340. (See Appendix to this report.)

33/ Rowlands, W.A. and Trenk, F.E. Rural Zoning Ordinances in Wisconsin Wis. Coll. of Agr., Madison. Circular 281, July 1936, p. 27.





Figure 10. - Farm buildings on a good road in a well established agricultural community of Koochiching County, Minnesota.

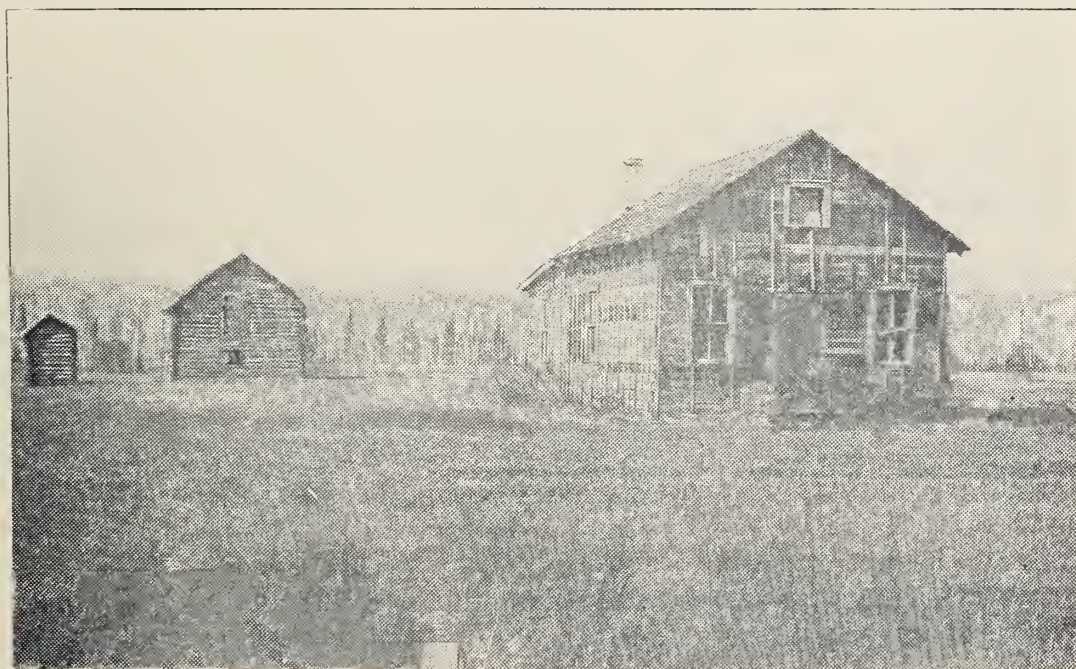


Figure 11. - Isolated vacant buildings, on State as well as on private land, are standing temptations to home seekers.





Rural zoning can serve the same purposes in Minnesota and in Koochiching County as it is serving in Wisconsin. Rowlands sums up the primary purpose of rural zoning as follows:

"No one will ever know the extent of human suffering and financial loss which has been prevented through the enactment of rural zoning ordinances. Certain it is that in the last three years many families have been prevented from purchasing isolated lands in northern Wisconsin because of the county zoning ordinances. They have been forced to secure land in the unrestricted districts where their opportunity for obtaining good farm land close to roads, schools, neighbors, community centers, and markets is infinitely better. Rural zoning ordinances have been designed primarily to fulfill this function." 34/

Similarly, no one can tell how much human suffering can be prevented or how much money can be saved by closing approximately 1,600,000 acres in Koochiching County to further settlement.

Only 6 percent of the land of Koochiching County is now in farms, and an additional 10 percent is considered suitable for farming from the standpoint of soil and location with regard to roads, schools, and markets. 35/ Thus, 82 percent of the county, an immense area of more than 1,600,000 acres, is without the restrictions legally possible under rural zoning, and is subject to settlement in almost any conceivable location. Forty-five vacant houses are in the area which presumably can be occupied by squatters or by legitimate settlers. (See fig. 11 ff p. 34.) Without restrictions, some of these places are likely to be occupied each year. Plenty of good land, well located with respect to roads and schools, is found in the agricultural areas on which families can settle and become assets rather than liabilities to their communities.

In any land-use readjustment program, the care with which policies and ordinances are administered and enforced will measure the degree of success. Particularly in the case of zoning ordinances, careful and just administration is paramount. In relocating isolated settlers, the sincerity of public officials in executing the program and the cooperation of settlers in making the needed changes are essential to the proper completion of the program.

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34/ Rowlands, W.A. Rural Zoning: Its Effect on Public Health and Schools Wisconsin Coll. of Agr., Madison. Spec. Cir. July 1936, p.6.

35/ Husbach, William F. and McMillen, R.E. Op. cit.

APPENDIX

Table 12.-Average cash income of 72 isolated settlers in Koochiching County by sources, for all groups, 1938

Source of cash income	All groups			Farmers			Nonfarmers			Families			Single men		
	Per settler	Per settler reporting	Dollars	Per farm	Per farm reporting	Dollars	Per settler	Per settler reporting	Dollars	Per family	Per family reporting	Dollars	Per man	Per man reporting	Dollars
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Dairy products	33	172		96	172		0	0		62	178		3	100	
Sheep	9	161		26	161		0	0		12	148		6	200	
Poultry	7	56		20	56		0	0		14	56		0	0	
Hogs	2	150		6	150		0	0		4	150		0	0	
Crops	21	126		60	126		0	0		23	95		19	219	
Total farm products	72	-		208	-		-	-		115	-		28	-	
Forest products	43	192		71	162		27	257		56	187		29	203	
Trapping, hunting 1/	26	109		36	111		20	106		33	134		18	71	
Outside work	65	197		54	194		71	198		56	206		76	177	
Work on road	20	65		19	48		20	85		31	68		8	53	
School bus driver 2/	42	378		20	165		54	633		82	378		0	0	
AAA payments	5	24		11	28		2	19		9	27		1	9	
Miscellaneous	52	287		94	588		23	173		57	265		46	269	
Total sources other than relief	253	-		305	-		223	-		324	-		178	-	
Direct relief	16	74		11	135		19	65		24	90		8	48	
WPA	40	242		39	244		41	241		73	246		6	194	
FSA grants	4	90		4	90		4	90		7	90		0	0	
CCC wages	5	165		3	66		6	270		9	165		0	0	
Old-age assistance	21	170		24	199		20	156		19	176		24	166	
Total relief sources	86	-		81	-		90	-		132	-		38	-	
Total all sources	411	-		594	-		313	-		571	-		244	-	

1/ For the 1938-39 season.  
2/ For the 1938-39 school year.

Table 13.-Average 1933 cash income, by source, of 60 settlers who have since been moved from the Pine Island Purchase Area

Source of cash income	Total		Farmers		Nonfarmers	
	Per	Per	Per	Per	Per	Per
	settler	settler	farm	farm	settler	settler
	: reporting	: reporting	: reporting	: reporting	: reporting	: reporting
	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Crops	45	100	75	100	0	0
Livestock	65	170	108	170	0	0
Forest products	17	206	27	241	3	67
Relief	47	116	47	131	46	100
Other	135	248	166	284	90	179
Total	309	-	423	-	139	-

Table 14.-Frequency distribution by amounts of total cash income of 60 scattered settlers who have been moved from the Pine Island Area, 1935

Total cash income	All settlers		Farmers		Nonfarmers	
<u>Dollars</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
0	5	8	0	0	5	20
1-199	26	45	12	33	14	60
200-399	12	20	9	25	3	12
400-599	9	15	7	20	2	8
600-799	4	7	4	11	0	0
800-999	1	2	1	3	0	0
1000 and over	3	5	3	8	0	0



Table 15.-Amount of public funds in the incomes of 72 isolated settlers in Koochiching County, Minnesota, 1938

Source of public income	Amount	Percent of total income
	<u>Dollars</u>	<u>Percent</u>
Direct relief	1,182	4
Works Progress Administration wages	2,903	10
Farm Security Administration grants	270	1
Civilian Conservation Corps wages	330	1
Old-age assistance	1,532	5
Soil Conservation payments	356	1
Work on county roads	1,420	5
School transportation or board aid	3,027	10
Total	11,020	37

Table 16.-Acreage, assessed value, full and true value, and 1938 tax levy for 53 isolated occupied tracts in Koochiching County

53 isolated tracts	1938 Assessment	Full and true value 1938			Tax levy 1938
		Total	Land	Buildings	
<u>Acres</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
6,862	5,791	26,750	22,110	4,640	1,303

Table 17.-Severity of isolation as measured by distance from several community facilities, for specified groups, Koochiching County

Facility and distance	37 Families	38 Bachelors	55 Pine Island settlers
	Percent	Percent	Percent
<u>Grocery Store</u>			
5 miles or less	32	27	28
5.1 to 10 miles	30	22	35
10.1 to 15 "	19	27	11
15.1 to 20 "	11	9	4
20.1 to 25 "	3	9	4
25.1 miles and over	5	6	18
<u>Doctor</u>			
5 miles or less	8	0	2
5.1 to 10 miles	5	3	0
10.1 to 15 "	19	21	22
15.1 to 20 "	8	9	11
20.1 to 25 "	8	9	25
25.1 miles and over	52	58	40
<u>Church</u>			
5 miles or less	22	16	39
5.1 to 10 miles	35	24	20
10.1 to 15 "	22	24	16
15.1 to 20 "	10	12	4
20.1 to 25 "	3	6	5
25.1 miles and over	8	18	16
<u>Shipping point</u>			
5 miles or less	19	18	27
5.1 to 10 miles	22	18	11
10.1 to 15 "	14	12	16
15.1 to 20 "	23	9	4
20.1 to 25 "	3	6	11
25.1 miles and over	19	37	31
<u>Grade school</u>			
5 miles or less	30	3	58
5.1 to 10 miles	32	19	30
10.1 to 15 "	27	41	6
15.1 to 20 "	8	19	0
20.1 to 25 "	3	9	4
25.1 miles and over	0	9	2
<u>High school</u>			
5 miles or less	19	3	25
5.1 to 10 miles	24	16	18
10.1 to 15 miles	24	31	18
15.1 to 20 "	19	19	10
20.1 to 25 "	3	3	6
25.1 miles and over	11	28	23
<u>School-bus route</u>			
5 miles or less	83	50	
5.1 to 10 miles	11	25	No
10.1 to 15 "	3	16	data
15.1 to 20 "	3	6	
20.1 to 25 "	0	3	
25.1 miles and over	0	0	

NOTES FROM A REPRESENTATIVE CROSS-SECTION  
OF ISOLATED SETTLEMENT IN KOOCHICHING COUNTY

Case No. 1

Thirty-one years ago an aged timber worker and his 35 year old son were lured to Koochiching County from southern Minnesota by the rich possibilities in cutting timber, trapping, and hunting. The county was sparsely settled, but it was believed that all the land would be homesteaded and used for farming as soon as the timber was removed. Consequently, ambitious settlers, lumber companies, speculators, and others inaugurated a road-building program throughout the area, and often several miles of expensive roads were built for one or two families. It so happened that these two men, together with a family which had homesteaded near them, managed to get 6 miles of road constructed primarily for their exclusive use.

Before many years the family became discouraged and moved away from the isolated location, but by this time the single man on the other isolated homestead had married a girl from the nearest village, 12 miles away. They are still there today at the ages of 66 and 42, respectively. They have 11 children, ranging in age from 6 months to 22 years. They live in a good frame house, which, according to the assessor's record, is valued at \$400. They have telephone service and an automobile, but are without electricity or radio, conveniences which would lessen to some extent the hardships of isolation. It is 6 miles to the nearest neighbor, 30 miles to a doctor and 12 miles to a grocery store, church, and railroad station.

In the last 14 years, \$4,610 have been spent in board-aid from public funds in order that the children from this family might be enrolled in school. By the time the youngest child is graduated from high school, if present rates with respect to board-aid are continued and if this settler remains in his isolated location, a total of \$10,000 in special board-aid will have been expended to educate the children from this one family. This is exclusive of the regular costs for buildings, equipment, teachers, maintenance, etc., which these children also enjoy and share with other children for whom no special board or transportation costs are incurred.

For the 6 miles of road maintained almost for the exclusive use of the one family, the 1938 maintenance cost was \$192, and was paid to members of the family. It is not an all-weather road, but it is an expensive one for just one family. The original cost was about \$600 per mile, much of which was done by the settler at regular wages; in fact, a considerable part of the maintenance has been done by him or his sons at regular wages or on a contract basis.

: During the last 14 years this settler has paid \$504 in taxes, whereas the State and county have spent \$4,610 in special board aid to educate his children and at least \$2,000 to maintain his road. Ironically,



the settler attempts to justify such public costs in his case by killing wolves for the State, although the State contributes \$15 to his pocket-book for each wolf he traps. He resents trapping or hunting by outsiders anywhere near his homestead except for the deer hunters who rent the shacks on his place during deer-hunting season. He feels that this is "his territory" and has been since he homesteaded 31 years ago.

This settler occupies 160 acres. The 1938 taxes, amounting to \$41.82, have been paid. He does little or no farming; in fact, he reported no income in 1938 from the sale of crops or livestock. One of the main reasons for the lack of farm income is the difficulty of marketing. It is almost impossible to market potatoes, dairy products, or any other farm products because of distance and road or weather conditions. The family is often snowbound for as much as a month at a time; this may be one reason that the settler owns so few livestock and sells no farm products. His only livestock are 2 cows, 3 heifers, and 21 hens. Of the 160 acres, 39 are cleared.

The 1938 cash income of this settler was \$904, derived from the following sources:

Hunting . . . . .	\$200
Work on road . . . . .	192
Old-age assistance . . . . .	105
Sale of blueberries . . . . .	50
Soil conservation payment . . . . .	43
Rent of cabins to deer hunters . . . . .	30
Forest products . . . . .	20
CCC wages (part of which was returned to son) . . . . .	264
Total . . . . .	\$904

#### Case No. 2

A young man employed at the paper mill in International Falls, the county seat of Koochiching County, arranged to buy 150 acres of cut-over land located  $1\frac{1}{2}$  miles from an all-weather road, 2 years ago. His aged father, who is dependent upon his son and direct relief for support, is occupying the place and attempting to clear and farm it. Less than 6 acres have been cleared.

The place was formerly a homestead; an old log house and a poor frame barn comprise the buildings. The  $1\frac{1}{2}$  miles of muskeg road were cut out many years ago during settlement and hopeful days of expansion, but it would cost \$5,000, according to estimates of the county engineer, to put this impassable muskeg road into all-weather condition. Such a road, if constructed, would be for the sole benefit of this one farm, and would probably cost \$50 or more annually to maintain.

The son, who is paying for the place, expects to move to it as soon as possible, and, as soon as he does, an additional public expense of not less than \$135 per year will be incurred to get his children out to the regular school-bus route, 2 miles away.

This farm is 2 miles from the nearest neighbor, 11 miles from a grocery store and church, and 31 miles from a doctor or railroad station. The 1938 taxes amounting to \$15.89 have not been paid, and an additional amount of \$49.16 is delinquent for 1936 and 1937.

Case No. 3

This family consists of husband, wife, and 15-year-old daughter, who live in a well-furnished house  $1\frac{1}{4}$  miles from an all-weather road. At present, this settler is "putting on the pressure" to get a road built at a cost of \$4,500. His next move will be to get a school bus to come to his place so his daughter will not have to walk a mile as she now does.

The head of this family received \$228 from direct and work relief and \$8.17 in payment for soil conservation practices in 1938. Out of this amount and what food he produced at home he managed to live and send his only child to high school, and he paid into the county treasury \$23.47 in taxes. His wife and daughter thoroughly dislike the isolated location but he is satisfied and intends to keep his taxes paid at any cost so the Government will not get a chance to move him.

Case No. 4

A 73-year-old settler allowed his 120 acres to revert to the State in 1935 with an accumulated delinquency of \$250.81. He and his second wife are still living there. They produce an excellent garden, sell a few eggs, keep two milk cows, and receive \$288 annually in the form of old-age assistance. The nearest neighbor is 2 miles away, grocery store and church  $3\frac{1}{2}$  miles, and doctor and railroad station are 28 miles away. While the 6 children were home and in school, public funds were spent in the form of board-aid and for road maintenance, although at present no public money is being spent for such purposes on this case.

Case No. 5

Ten miles from an all-weather road and  $3\frac{1}{2}$  miles from the nearest neighbor lives a 60-year-old unmarried lumberjack. He is 28 miles from a grocery store or church and 50 miles from a doctor or railroad station. His sole companion is a dog. Contacts with people are rare. Taxes, amounting to \$25.84, have been paid on his 160-acre homestead. He is living mostly from money saved from recent sales of timber from his land. He has a garden, but otherwise no farming is carried on and he has no livestock. He gets no relief or other public funds, and nothing is spent on his road.



MINNESOTA ENABLING ACT FOR RURAL ZONING

An act authorizing boards of county commissioners in certain counties in conjunction with town boards to enact ordinances establishing districts and regulating the location and use of structures or occupancy of lands therein; and to repeal inconsistent acts.

Be it enacted by the Legislature of the State of Minnesota:

Section 1. Building restrictions in certain counties. For the purpose of promoting health, safety, morals, public convenience, general prosperity and public welfare, the county board of any county in which there is now or may hereafter be located a state forest or a federal forest, or a state conservation area, is hereby empowered to regulate structures and the use, condition of use or occupancy of lands for residence, recreation, agriculture, water conservation, forestry, and other purposes.

Section 2. County Board to designate districts. For any and all of said purposes, the county board may by ordinance divide all or any part of the unincorporated portions of the county into districts of such number, shape, and area as may be deemed necessary, and may likewise enact suitable regulations to carry out the purposes of this act. Such regulations shall be uniform in each district, but the regulations in one district may differ from those in other districts.

Section 3. Object of regulations. Such regulations shall be made in accordance with a comprehensive plan and designed for any or all of the following purposes:

- (1) To protect and guide the development of non-urban areas;
- (2) To secure safety from fire, flood, and other dangers;
- (3) To encourage a distribution of population and a mode of land utilization that will facilitate the economical and adequate provision of transportation, roads, water supply, drainage, sanitation, education, recreation, or other public requirements;
- (4) To lessen governmental expenditures;
- (5) To conserve and develop natural resources;
- (6) To prevent soil erosion;
- (7) To foster the state's agricultural or other industries;
- (8) To protect the food supply;
- (9) To prevent waste.

Such regulations shall be made with a reasonable consideration, among other things, to the character of the district and its peculiar suitability for particular uses.

Section 4. County and Town Boards to investigate. The county board in conjunction with the town boards of the affected areas shall investigate and determine the necessity of establishing districts and prescribing regulations therefor as herein provided, and for that purpose



shall consult with residents of affected areas, and with federal, state and other agencies concerned. State, county, town, city, and village officials, departments, or agencies are hereby authorized to make available upon request of the county board such pertinent information as they may possess, and to render technical assistance, and to cooperate in assembling and compiling pertinent information.

Section 5. County Board to prepare plan. After investigation as herein provided, the county board shall prepare a proposed ordinance establishing districts and prescribing regulations therefor as herein provided, which shall be approved by the town boards of the areas affected, and shall be filed in the office of the county auditor.

Section 6. Public hearings. After the filing of the proposed ordinance, the county board shall hold a public hearing thereon, at which the proposed ordinances shall be submitted for discussion, and parties in interest and citizens shall have an opportunity to be heard. Notice of time, place, and purpose of such hearing shall be published once each week for three consecutive weeks in the official newspaper of the county, and in such other legal newspapers published in the county as the county board may deem necessary.

Section 7. Publication of ordinances. Following the public hearing, the county board may adopt the proposed ordinance, with such changes as they may deem advisable. Forthwith after the adoption of any such ordinance, the county auditor shall cause the same to be published for three successive weeks in the official newspaper of the county, and in such other legal newspapers published in the county as the county board may deem necessary. Proof of such publication shall be filed in the office of the county auditor, and thereupon the ordinance shall take effect.

Section 8. May be amended or repealed. Any such ordinance may from time to time be amended or repealed by the county board, upon like proceedings as in case of the adoption of an ordinance.

Section 9. May compel attendance of witnesses. The chairman or acting chairman of the county board may compel attendance of witnesses and administer oaths to witnesses at all hearings hereunder. The county auditor as clerk of said board shall keep separate minutes of all proceedings, including appearances, and other official actions hereunder, which may be public records.

Section 10. Separate hearings. Any person aggrieved by any provision of an ordinance adopted hereunder, or any amendment thereto may, within sixty days after the taking effect of such provision, demand a separate hearing thereon before the county board. Such demands shall be in writing and shall specify in detail the ground of the objections. The demand shall be filed with the county auditor. A hearing thereon shall be held by the board no sooner than ten days nor longer than forty days after the filing of the demand with the county auditor, who shall notify the applicant the place and time of hearing. At such hearing the board shall consider

the matter complained of, and shall notify the applicant by registered mail, what action, if any, it proposes to take thereon. The provisions of this section shall not operate to curtail or exclude the exercise of any other rights or powers of the county board or any citizen hereunder.

Section 11. May adjust enforcement. The county board is authorized to adjust the application or enforcement of any provision of an ordinance hereunder in any specific case where a literal enforcement of such provision would result in great practical difficulties, unnecessary hardship or injustice, so as to avoid such consequences, provided such action shall not be contrary to the public interest of the general purposes hereof.

Section 12. Appeals to District Court. Any person or persons, jointly or severally, aggrieved by a decision of the county board, may, within thirty days from the date the applicant received the notice of the proposed action of the county board, appeal to the district court in the same manner as an appeal is taken from an order or a county board disallowing a claim. Within ten days after an appeal has been taken the auditor shall, without charge, file in the office of the clerk of said court a certified copy of the demand for hearing, the order of the county board appealed from, together with the minutes and records of the county board with reference thereto, including the date of filing the appeal. The proceedings shall be put upon the calendar for trial at the next general or special term of the district court. The court shall summarily hear and determine the issues and may take such testimony as is necessary to determine the matter.

Section 13. Not to affect use at time of passage of act. The lawful use of occupation of land or premises existing at the time of the adoption of an ordinance hereunder may be continued, although such use or occupation does not conform to the provision thereof, but if such non-conforming use or occupancy is discontinued for a period of more than two years, any subsequent use or occupancy of said land or premises shall be a conforming use or occupancy; provided, however, that if the state acquires title to any land or premises all further use or occupancy thereof shall be a conforming use or occupancy.

Section 14. County Board may regulate non-conforming uses. The county board may, by ordinance as herein provided, prescribe such regulations, not contrary to law, as it deems desirable or necessary to regulate and control non-conforming uses and occupancies.

Section 15. County Board to make complete list. Immediately after the adoption of any zoning ordinance, the county board shall prepare a complete list of all non-conforming uses and occupancies existing at the time of adoption of such ordinance. Such list shall contain the name of the owner or owners, and any occupant other than the owner, the legal description or descriptions of the land and the nature and extent of the non-conforming use. Copies of such lists shall be filed for record in the office of the register of deeds and of the county auditor,



and shall be corrected from time to time as the county board may prescribe. Immediately after the filing of such list, the county auditor shall furnish each town assessor, or county assessor, as the case may be, a record of non-conforming uses or occupancies existing within his assessment district. At the time of each assessment thereafter each assessor shall prepare a list of all non-conforming uses or occupancies, which list shall be given to the county board. The county board shall thereupon amend the previous list and file a certified copy of the same in the office of the register of deeds of the county.

Section 16. County Board to enforce Act. The county board shall provide for the enforcement of this act and of ordinances and regulations made thereunder, and may impose enforcement duties on any officer, department, agency, or employee of the county.

Section 17. To have force and effect of law. The provisions of all ordinances and regulations adopted hereunder shall have the force and effect of law. No person shall use or occupy any lands or premises in violation of any such ordinance or regulations except as hereinafter provided. A violation of this act or of any ordinance or by regulation hereunder shall be a misdemeanor.

Section 18. Tax payers may compel action. Any taxpayer or taxpayers of the county may institute mandamus proceedings in district court to compel specific performance, by the proper official or officials, of any duty required by this act or any ordinance adopted hereunder.

Section 19. May restrain violations. In the event of a violation or a threatened violation of this act or of any ordinance or regulation adopted hereunder, the county board or any member thereof, in addition to other remedies, may institute appropriate actions or proceedings to prevent, restrain, correct, or abate such violations or threatened violations. It shall be the duty of the county attorney to institute such actions, and the county board may allow him reasonable compensation therefor, in addition to his other compensation.

Section 20. County Auditor to file certified copy with register of deeds. Upon the adoption of any ordinance hereunder, the county auditor shall file a certified copy thereof with the register of deeds for record.

Section 21. County Board to appropriate money. The county board is empowered to appropriate out of the general revenue fund of the county such moneys, not otherwise appropriated, as may be necessary for the purpose of this act.

Section 22. Provisions severable. The provisions of this act shall be separable, and if any provision, or the application thereof, shall be held unconstitutional or invalid, it shall not affect any other provision or application.



Section 23. Exceptions. The following uses are excepted from the provision of this act: (1) Hunting and fishing cabins on privately owned lands; (2) Mines, quarries and gravel pits; (3) Hydro dams, private dams, flowage areas, transmission lines and substations; (4) The harvest of any wild crop.

Approved April 20, 1939 (Chapter 340, Laws of 1939.).

PROPOSED ZONING ORDINANCE FOR KOOCHICHIING COUNTY 36/

WHEREAS, Pursuant to Laws of Minnesota for 1939, Chapter 340, the county board of the County of Koochiching, State of Minnesota, after due investigation, notice, hearing, and other proceedings, as provided by said chapter, has determined to establish districts in said county and prescribe regulations therefor as hereinafter provided, and the same have been approved by the town boards of the areas affected:

NOW, THEREFORE, BE IT ORDAINED by the county board of the County of Koochiching, State of Minnesota:

Section 1. Districts - (a) All of the unincorporated area of the county is hereby divided into districts of three types to be known as restricted, limited, and unrestricted districts, respectively, which districts are bounded and numbered as hereinafter described and as shown upon the official map, designated as the Zoning Map of Koochiching County, Minnesota, dated \_\_\_\_\_ 1940, certified as such by the chairman of the county board and the county auditor of said county, and filed in the office of said county auditor on \_\_\_\_\_, 1940, a copy of which map is attached hereto and made a part of this ordinance as is fully described herein, including all notations, references, and other things shown on said map. All such districts exclude incorporated areas. Except as otherwise indicated, the boundaries of all such districts follow boundary lines of political subdivisions, center lines of highways and railways, lines established by the United States government survey or legal subdivisions thereof, and boundaries of lakes and streams.

Section 2. Restricted Districts - (a) Districts No. \_\_\_\_\_ shall be restricted districts.

(b) District No. \_\_\_\_\_ shall consist of the following described areas: (Give exact legal descriptions by townships, fractional divisions, metes and bounds, etc. Describe likewise other restricted districts, if any, in separate lettered paragraphs).

Section 3. Use of Property in Restricted Districts. Except as otherwise hereinafter provided, no building or structure shall be erected, occupied or used by any person or persons as an established home, or with intent to establish a home therein in any restricted district unless such home is necessary for use and is used solely in connection with a mine, quarry, gravel pit, hydro dam, private dam, flowage area, transmission

36/ This proposed zoning ordinance has been prepared by the U.S. Department of Agriculture in cooperation with State and local officials.

line, or sub-station. Buildings and structures in the process of construction on the effective date of this ordinance may be completed and occupied as homes, free from the foregoing restrictions. The word "home" as used herein shall not be construed to include any building or structure occupied solely for temporary hunting, fishing, or summer residential purposes, or for the harvesting of wild crops during the legal or customary seasons for such activities.

Section 4. Limited Districts - Districts No. \_\_\_\_\_ shall be limited districts.

(b) District No. \_\_\_\_\_ shall consist of the following described areas: (Describe in like manner as restricted districts).

Section 5. Except as otherwise hereinafter provided, no land in excess of one acre shall be used by any person or family for the production of field or truck crops, livestock, or livestock products in any limited district. The term "family" as used herein shall mean only the immediate family, including parents and their children under the age of eighteen years living together in the same household; provided, that a guardian or other person having custody of children shall have the same status as a parent for the purposes hereof.

Section 6. Unrestricted Districts - Unrestricted districts shall comprise all unincorporated areas within the county not specifically included within restricted districts or limited districts as hereinbefore defined. This ordinance imposes no restrictions upon uses or occupancies within such unrestricted districts.

Section 7. Non-conforming Uses and Occupancies - Any lawful use or occupancy of any land or premises existing on the effective date of this ordinance, or an applicable amendment thereof, which does not conform to the provisions thereof may be continued, but if such non-conforming use or occupancy is discontinued for a period of more than two years, any subsequent use or occupancy of such land or premises shall conform with the provisions of this ordinance or amendment, as the case may be.

Section 8. Hearings on Objections to ordinance - Any person aggrieved by any provision of this ordinance, or any amendment thereof, may, within sixty days after the taking effect of such provision, demand a separate hearing thereon before the county board. Such demand shall be in writing, shall specify in detail the ground of the objections, and shall be filed with the county auditor. Thereupon further proceedings shall be had as provided by law.

Section 9. Relief from Literal Enforcement - Where the literal enforcement of any provision of this ordinance would result in great practical difficulties, unnecessary hardship, or injustice, the county board, upon petition of any person so affected or aggrieved, may grant relief as provided by law.



Section 10. Appeals to District Court - Decisions of the county board in matters affected by this ordinance may be appealed to the district court in the manner provided by law.

Section 11. Penalties - The provisions of this ordinance have the force and effect of law. Any violation of such provisions is a misdemeanor and is punishable as such. Any such violation or threatened violation may be restrained as provided by law.

Section 12. Severability. The provisions of this ordinance shall be deemed severable, and if any provision or the application thereof to any person or circumstance is held invalid, the remainder of the ordinance and the application of such provision to other persons and circumstances shall not be affected thereby.

Section 13. Effective Date. This ordinance becomes effective after publication for three successive weeks and upon the filing of proof thereof in the office of the county auditor as provided by law.



